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EDITOR

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Eclectic Magazine

OF

FOREIGN LITERATURE, SCIENCE, AND ART.

New Series,
Vol. XXXIII., No. 2.

FEBRUARY, 1881.

{ Old Series Complete in 63 vols.

THE UNITY OF NATURE.

BY THE DUKE OF ARGYLL.

IV.

ON THE LIMITS OF HUMAN KNOWLEDGE CONSIDERED WITH REFERENCE TO THE UNITY OF NATURE.

AND yet, although it is to Nature in this highest and widest sense that we belong—although it is out of this fountain that we have come, and it is out of its fulness that we have received all that we have and are, men have doubted, and will doubt again, whether we can be sure of anything concerning it.

If this terrible misgiving had affected individual minds alone in moments of weariness and despair, there would have been little to say about it. Such moments may come to all of us, and the distrust which they leave behind them may be the sorest of human trials. It is no unusual result of abortive yet natural effort and of innate yet baffled curiosity. But this doubt, which is really nothing

more than a morbid effect of weakness and fatigue, has been embraced as a doctrine and systematized into a philosophy. Nor can it be denied that there are some partial aspects of our knowledge in which its very elements seem to dissolve and disappear under the power of self-analysis, so that the sum of it is reduced to little more than a consciousness of ignorance. All that we know of matter is so different from all that we are conscious of in mind that the relations between the two are really incomprehensible and inconceivable to us. Hence this relation constitutes a region of darkness in which it is easy to lose ourselves in an abyss of utter scepticism. What proof have we—it has been often asked—that the mental impressions we derive from objects are in any way like the truth? We know only the phenomena, not the reality of things. We are conversant with things as they appear,

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not with things as they are "in themselves." What proof have we that these phenomena give us any real knowledge of the truth? How, indeed, is it possible that knowledge so "relative" and so "conditioned"—relative to a mind so limited, and conditioned by senses which tell us of nothing but sensations—how can such knowledge be accepted as substantial? Is it not plain that our conceptions of creation and of a Creator are all mere "anthropomorphism?" Is it not our own shadow that we are always chasing? Is it not a mere bigger image of ourselves to which we are always bowing down?

It is upon suggestions such as these that the Agnostic philosophy, or the philosophy of Nescience, is founded—the doctrine that, concerning all the highest problems which it both interests and concerns us most to know, we never can have any knowledge or any rational and assured belief.

It may be well to come to the consideration of this doctrine along those avenues of approach which start from the conception we have now gained of the unity of nature.

Nothing, certainly, in the human mind is more wonderful than this—that it is conscious of its own limitations. Such consciousness would be impossible if these limitations were in their nature absolute. The bars which we feel so much, and against which we so often beat in vain, are bars which could not be felt at all unless there were something in us which seeks a wider scope. It is as if these bars were a limit of opportunity rather than a boundary of power. No absolute limitation of mental faculty ever is, or ever could be, felt by the creatures whom it affects. Of this we have abundant evidence in the lower animals, and in those lower faculties of our own nature which are of like kind to theirs. All their powers, and many of our own, are exerted without any sense of limitation, and this because of the very fact that the limitation of them is absolute and complete. In their own nature they admit of no larger use. The field of effort and of attainable enjoyment is, as regards them, co-extensive with the whole field in view. Nothing is seen or felt by them which may not be possessed. In such possession

all exertion ends and all desire is satisfied. This is the law of every faculty subject to a limit which is absolute. In physics, the existence of any pressure is the index of a potential energy which, though it may be doing no work, is yet always capable of doing it. And so in the intellectual world, the sense of pressure and confinement is the index of powers which under other conditions are capable of doing what they cannot do at present. It is in these conditions that the barrier consists, and at least to a large extent they are external. What we feel, in short, is less an incapacity than a restraint.

So much undoubtedly is to be said as to the nature of those limitations on our mental powers of which we are conscious. And the considerations thus presented to us are of immense importance in qualifying the conclusions to be drawn from the facts of consciousness. They do not justify, although they may account for, any feeling of despair as to the ultimate accessibility of that knowledge which we so much desire. On the contrary, they suggest the idea that there is within us a reserve of power to some unknown and indefinite extent. It is as if we could understand indefinitely more than we can discover, if only some higher intelligence would explain it to us.

But if it is of importance to take note of this reserve of power of which we are conscious in ourselves, it is at least of equal importance to estimate aright the conceptions to which we can and do attain without drawing upon this reserve at all. Not only are the bars confining us bars which we can conceive removed, but they are bars which in certain directions offer no impediment at all to a boundless range of vision. Perhaps there is no subject on which the fallacies of philosophic phraseology have led to greater errors. "That the finite cannot comprehend the infinite" is a proposition constantly propounded as an undoubted and all-comprehensive truth. Such truth as does belong to it seems to come from the domain of physics, in which it represents the axiom that a part cannot be equal to the whole. From this, in the domain of mind, it comes to represent the truth, equally undeniable, that we cannot know all

that infinity contains. But the meaning into which it is liable to pass when applied to mind is that man cannot conceive infinity. And never was any proposition so commonly accepted which, in this sense, is so absolutely devoid of all foundation. Not only is infinity conceivable by us, but it is inseparable from conceptions which are of all others the most familiar. Both the great conceptions of space and time are, in their very nature, infinite. We cannot conceive of either of these as subject to limitation. We cannot conceive of a moment after which there shall be no more time, nor of a boundary beyond which there is no more space. This means that we cannot but think of space as infinite, and of time as everlasting.

If these two conceptions stood alone they would be enough, for in regard to them the only incapacity under which we labor is the incapacity to conceive the finite. For all the divisions of space and time with which we are so familiar—our days and months and years, and our various units of distance—we can only think of as bits and fragments of a whole which is illimitable. But although these great conceptions of space and time are possibly the only conceptions to which the idea of infinity attaches as an absolute necessity of thought, they are by no means the only conceptions to which the same idea can be attached, and probably ought to be so. The conception of matter is one, and the conception of force is another, to which we do not, perhaps, attach, as of necessity, the idea of indestructibility, or the idea of eternal existence and of infinite extension. But it is remarkable that in exact proportion as science advances, we are coming to understand that both of these are conceptions to which the idea of infinity not only may be, but ought to be, attached. That is to say, that the eternal existence of matter and the eternal duration of force are not only conceivable but true. Nay, it may be our ignorance alone that makes us think we can conceive the contrary. It is possible to conceive of space being utterly devoid of matter, only, perhaps, because we are accustomed to see and to think of spaces which are indeed empty of visible substances. We can expel also the invisible substances or gases of the atmosphere, and we can

speak and think of the result as a vacuum. But we know now that when air and all other terrestrial gases are gone the luminiferous medium remains; and so far as we have means of knowing, this medium is ubiquitous and omnipresent in the whole universe of space. In like manner we are accustomed to see solid matter so dissipated as to be invisible, intangible, and wholly imperceptible; and therefore we think we can imagine matter to be really destructible. But the more we know of it the more certain we become that it cannot be destroyed, and can only be redistributed. In like manner, in regard to force, we are accustomed to see matter in what is called statical equilibrium—that is to say, at rest; and so, perhaps, we think we can conceive the cessation or extinction of force. But here again the progress of research is tending more and more to attach irrevocably the idea of indestructibility—that is, of eternal existence—to that which we know as force. The truth is that this conception is really implicitly involved in the conception of the indestructibility of matter. For all that we know of matter is inseparably connected with the forces which it exerts, or which it is capable of exerting, or which are being exerted in it. The force of gravitation seems to be all-pervading, and to be either an inherent power or property in every kind, or almost every kind, of matter, or else to be the result of some kind of energy which is universal and unquenchable. All bodies, however passive and inert they may seem to be under certain conditions, yet indicate by their very existence the power of those molecular forces to which the cohesion of their atoms is due. The fact is now familiar to us that the most perfect stillness and apparent rest in many forms of matter is but the result of a balance or equilibrium maintained between forces of the most tremendous energy, which are ready to burst forth at a moment's notice, when the conditions are changed under which that balance is maintained. And this principle, which has become familiar in the case of what are called explosive substances, because of the ease and the certainty with which the balanced forces can be liberated, is a principle which really prevails in the composition of all

material substances whatever, the only difference being that the energies by which their molecules are held together are so held under conditions which are more stable—conditions which it is much more difficult to change—and conditions, therefore, which conceal from us the universal prevalence and power of force in the constitution of the material universe. It is, therefore, distinctly the tendency of science more and more to impress us with the idea of the unlimited duration and indestructible nature both of matter and of the energies which work in and upon it.

One of the scientific forms under which this idea is expressed is the conservation of energy. It affirms that though we often see moving bodies stopped in their course, and the energy with which they move apparently extinguished, no such extinction is really effected. It affirms that this energy is merely transformed into other kinds of motion which may or may not be visible, but which, whether visible or not, do always really survive the motion which has been arrested. It affirms, in short, that energy, like matter, cannot be destroyed or lessened in quantity, but can only be redistributed.

As, however, the whole existing order of nature depends on very special distributions and concentrations of force, this doctrine affords no ground for presuming on the permanence, or even on the prolonged continuance, of that order. Quite the contrary; for another general conception has been attained from science which at first sight appears to be a contradiction of the doctrine of "Conservation of Energy"—namely, the "Dissipation of Energy." This doctrine, however, does not affirm that energy can be dissipated in the sense of being wholly lost or finally extinguished. It only affirms that all the existing concentrations of force are being gradually exhausted, and that the forces concerned in them are being diffused (generally in the form of heat) more and more equally over the infinitudes of matter and of space.

Closely connected with, if indeed it be not a necessary part and consequence of, these conceptions of the infinity of space and time, of matter and of force, is the more general concept of causation.

It is impossible to conceive of anything happening without a cause. Even if we could conceive the utter destruction or annihilation of any particular force or form of force, we cannot conceive of this very destruction happening except as the effect of some cause. All attempts to reduce this idea of causation to other and lower terms have been worse than futile. They have uniformly left out something which is of the very essence of the idea. The notion of "uniform antecedence" is not equivalent. "Necessary antecedence" is more near the mark. These words do indeed indicate the essential element in the idea with tolerable clearness. But, like all other simple fundamental conceptions, the idea of causation defies analysis. As, however, we cannot dissociate the idea of causation from the idea of force or energy, it may, perhaps, be said that the indestructibility or eternal duration of force is a physical doctrine which gives strength and substance to the metaphysical concept of causation. Science may discover, and indeed has already discovered, that as regards our application of the idea of cause, and of the correlative idea of effect, to particular cases of sequence, there is often some apparent confusion arising from the fact that the relative positions of cause and effect may be interchangeable, so that A, which at one moment appears as the cause of B, becomes at another moment the consequence of B, and not its cause. Thus heat is very often the cause of visible motion, and visible motion is again the cause of heat. And so of the whole cycle of physical forces, which Sir W. Grove and others have proved to be "correlated"—that is, to be so intimately related that each may in turn produce or pass into all the others. But this does not really obscure or cast any doubt upon the truth of our idea of causation. On the contrary, that idea is confirmed in receiving a new interpretation, and in the disclosure of physical facts involving the same conception. The necessity of the connection between an effect and its cause receives an unexpected confirmation when it comes to be regarded as simply the necessary passing of an energy which is universal and indestructible from one form of action into another. Heat becomes the cause

of light because it is the same energy working in a special medium. Conversely light becomes the cause of heat, because again the same energy passes into another medium and there produces a different effect. And so all the so-called "correlated forces" may be interchangeably the cause or the consequence of each other, according to the order of time in which the changes of form are seen. This, however, does not confound, but only illustrates the ineradicable conviction that for all such changes there must be a cause. It may be perfectly true that all these correlated forces can be ideally reduced to different "forms of motion;" but motion itself is inconceivable except as existing in matter, and as the result of some moving force. Every difference of direction in motion or of form in matter implies a change, and we can conceive no change without a cause—that is to say, apart from the operation of some condition without which that change would not have been.

The same ultimate conceptions, and no other, appear to constitute all the truth that is to be found in a favorite doctrine among the cultivators of physical science—the so-called "Law of Continuity." This phrase is indeed often used with such looseness of meaning that it is extremely difficult to understand the primary signification attached to it. One common definition, or rather one common illustration, of this law is said to be that nature does nothing suddenly—nothing "*per saltum*." Of course this can only be accepted under some metaphorical or transcendental meaning. In nature there is such a thing as a flash of lightning, and this is generally recognized as sufficiently sudden. A great many other exertions of electric force are of similar rapidity. The action of chemical affinity is always rapid, and very often even instantaneous. Yet these are among the most common and the most powerful factors in the mechanism of nature. They have the most intimate connection with the phenomena of life, and in these the profoundest changes are often determined in moments of time. For many purposes to which this so-called "Law of Continuity" is often applied in argument no idler dogma was

ever invented in the schools. There is a common superstition that this so-called law negatives the possibility, for example, of the sudden appearance of new forms of life. What it does negative, however, is not appearances which are sudden, but only appearances which have been unprepared. Innumerable things may come to be—in a moment—in the twinkling of an eye. But nothing can come to be without a long, even if it be a secret, history. The "Law of Continuity" is, therefore, a phrase of ambiguous meaning; but at the bottom of it there lies the true and invincible conviction that for every change, however sudden—for every "leap," however wide—there has always been a long chain of predetermining causes, and that even the most tremendous bursts of energy and the most sudden exhibitions of force have all been slowly and silently prepared. In this sense the law of continuity is nothing but the idea of causation. It is founded on the necessary duration which we cannot but attribute to the existence of force, and this appears to be the only truth which the law of continuity represents.

When now we consider the place in the whole system of our knowledge which is occupied by these great fundamental conceptions of time and space, and of matter and of force, and when we consider that we cannot even think of any one of these realities as capable of coming to an end, we may well be assured that, whatever may be the limits of the human mind, they certainly do not prevent us from apprehending infinity. On the contrary, it would rather appear that this apprehension is the invariable and necessary result of every investigation of nature.

It is indeed of the highest importance to observe that some of these conceptions, especially the indestructibility of matter and of force, belong to the domain of science. That is to say, the systematic examination of natural phenomena has given them distinctness and a consistency which they never possessed before. As now accepted and defined, they are the result of direct experiment. And yet, strictly speaking, all that experiment can do is to prove that in all the cases in which either matter or force seems to be destroyed no such destruc-

tion has taken place. Here, then, we have a very limited and imperfect amount of "experience" giving rise to an infinite conception. But it is another of the suggestions of the Agnostic philosophy that this can never be a legitimate result. Nevertheless, as a matter of fact, these conceptions have been reached. They are now universally accepted and taught as truths lying at the foundation of every branch of natural science—at once the beginning and the end of every physical investigation. They are not what are ordinarily called "laws." They stand on much higher ground. They stand behind and before every law, whether that word be taken to mean simply an observed order of facts, or some particular force to which that order is due, or some combinations of force for the discharge of function, or some abstract definition of observed phenomena such as the "laws of motion." All these, though they may be "invariable" so far as we can see, carry with them no character of universal or necessary truth—no conviction that they are and must be true in all places and for all time. There is no existing order—no present combinations of matter or of force—which we cannot conceive coming to an end. But when that end is come we cannot conceive but that something must remain, if it be nothing else than that by which the ending was brought about, or, as it were, the raw materials of the creation which has passed away. That this conception, when once suggested and clearly apprehended, cannot be eradicated, is one of the most indisputable facts of instructed consciousness. That no possible amount of mere external observation or experiment can cover the infinitude of the conclusion is also unquestionably true. But if "experience" is to be upheld as in any sense the ground and basis of all our knowledge, it must be understood as embracing that most important of all kinds of experience in the study of nature—the experience we have of the laws of mind. It is one of the most certain of those laws that in proportion as the powers of the understanding are well developed, and are prepared by previous training for the interpretation of natural facts, there is no relation whatever be-

tween the time occupied in the observation of phenomena and the breadth or sweep of the conclusions which may be arrived at from them. A single glance, lasting not above a moment of time, may awaken the recognition of truths as wide as the universe and as everlasting as time itself. Nay, it has often happened in the history of science that such recognitions of general truths have been reached by no other kind of observation than that of the mind becoming conscious of its own innate perceptions. Conceptions of this nature have perpetually gone before experiment—have suggested it, guided it, and have received nothing more than corroboration from it. I do not say that these conceptions have been reached without any process. But the process has been to a large extent as unconscious as that by which we see the light. I do not say they have been reached without "experience," even in that narrow sense in which it means the observation of external things. But the experience has been nothing more than the act of living in the world, and of breathing in it, and of looking round upon it. These conceptions have come to man because he is a being in harmony with surrounding nature. The human mind has opened to them as a bud opens to the sun and air. So true is this that when reasons have been given for the conclusions thus arrived at—these reasons have often been quite erroneous. Nothing in the history of philosophy is more curious than the close correspondence between many ideas enunciated by the ancients as the result of speculation, and some, at least, of the ideas now prevalent as the result of science. It is true that the ancients expressed them vaguely, associated them with other conceptions which are wide of the truth, and quoted in support of them illustrations which are often childish. Nevertheless, the fact remains that they had attained to some central truths, however obscured the perception may have been by ignorance of the more precise and accurate analogies by which they can be best explained, and which only the process of observation has revealed. "They had in some way grasped," says Mr. Balfour Stewart,*

* "Conservation of Energy," p. 135.

"the idea of the essential unrest and energy of things. They had also the idea of small particles or atoms; and finally of a medium of some sort, so that they were not wholly ignorant of the most profound and deeply-seated of the principles of the material universe." There is but one explanation of this, but it is all-sufficient. It is that the mind of man is a part, and one at least of the highest parts, of the system of the universe—the result of mechanism most suited to the purpose of catching and translating into thought the light of truth as embodied in surrounding nature.

We have seen that the foundations of all conscious reasoning are to be found in certain propositions which we call self-evident. That is to say, in propositions the truth of which is intuitively perceived. We have seen, too, as a general law affecting all manifestations of life or mind, even in its very lowest forms, that instinctive or intuitional perceptions are the guide and index of other and larger truths which lie entirely beyond the range of the perception or intuition which is immediately concerned. This law holds good quite as much of the higher intuitions which are peculiar to man as of the mere intuitions of sensation which are common to him and to the animals beneath him. The lowest savage does many things by mere instinct which contain implicitly truths of a very abstract nature—truths of which, as such, he has not the remotest conception, and which in the present undeveloped condition of his faculties it would be impossible to explain to him. Thus, when he goes into the forest to cut a branch fit for being made into a bow, or when he goes to the marsh to cut a reed fit for being made into an arrow, and when in doing so he cuts them off the proper length by measuring them by the bows and arrows which he already has, in this simple operation he is acting on the abstract and most fruitful truth that "things equal to the same thing are equal to one another." This is one of the axioms which lie at the basis of all mathematical demonstration. But as a general, universal, and necessary truth the savage knows nothing of it—as little as he knows of the wonderful conse-

quences to which it will some day lead his children or descendants. So in like manner when the savage designs, as he often does, most ingenious traps for the capture of his prey, and so baits them as to attract the animals he desires to catch, he is counting first on the constancy and uniformity of physical causation, and, secondly, on the profoundly different action of the motives which determine the conduct of creatures having life and will. But of neither of these as general truths does he know anything, and of one of them at least not even the greatest philosophers have reached the full depth or meaning. Nevertheless, it would be a great error to suppose that the savage, because he has no conception of the general truth involved in his conduct, has been guided in that conduct by any thing in the nature of chance or accident. His intuitions have been right, and have involved so much perception of truth as is necessary to carry him along the little way he requires to travel, because the mind in which those intuitions lie is a product and a part of nature—a product and part of that great system of things which is held together by laws intelligible to mind—laws which the human mind has been constructed to feel even when it cannot clearly see. Moreover, when these laws come to be clearly seen, they are seen only because the mind has organs adjusted to the perception of them, and because it finds in its own mechanism corresponding sequences of thought.

It was the work of a great German metaphysician toward the close of the last century to discriminate and define more systematically than had been done before some at least of those higher elements of thought which, over and above the mere perception of external things, the mind thus contributes out of its own structure to the fabric of knowledge. In doing this he did immortal service—proving that when men talked of "experience" being the source of knowledge they forgot that the whole process of experience presupposes the action of innate laws of thought, without which experience can neither gather its facts nor reach their interpretation. "Experience," as Kant most truly said, is nothing but a "synthesis of intuitions"—a building

up or putting together of conceptions which the access of external nature finds ready to be awakened in the mind. The whole of this process is determined by the mind's own laws—a process in which even observation of outward fact must take its place according to principles of arrangement in which alone all explanation of them consists, and out of which any understanding of them is impossible.

And yet this great fact of a large part of our knowledge—and that the most important part—coming to us out of the very furniture and constitution of the mind itself, has been so expressed and presented in the language of philosophy as rather to undermine than to establish our confidence in the certainty of knowledge. For if the mind is so spoken of and represented as to suggest the idea of something apart from the general system of nature, and if its laws of thought are looked upon as "forms" or moulds into which, by some artificial arrangement or by some mechanical necessity, everything from outside must be squeezed and made to fit—then it will naturally occur to us to doubt whether conceptions cut out and manufactured under such conditions can be any trustworthy representation of the truth. Such, unfortunately, has been the mode of representation adopted by many philosophers—and such accordingly has been the result of their teaching. This is the great source of error in every form of the idealistic philosophy, but it is a source of error which can be perfectly eliminated, leaving untouched and undoubted the large body of truths which has made that philosophy attractive to so many powerful minds. We have only to take care that in expressing those truths we do not use metaphors which are misleading. We have only to remember that we must regard the mind and the laws of its operation in the light of that most assured truth—the unity of nature. The mind has no "moulds" which have not themselves been moulded on the realities of the universe—no "forms" which it did not receive as a part and a consequence of a unity with the rest of nature. Its conceptions are not manufactured; they are developed. They are not made; they simply grow. The order of the laws of thought under

which it renders intelligible to itself all the phenomena of the universe is not an order which it invents, but an order which it simply feels and sees. And this "vision and faculty divine is a necessary consequence of its congenital relations with the whole system of nature—from being bone of its bone—flesh of its flesh—from breathing its atmosphere, from living in its light, and from having with it a thousand points of contact visible and invisible, more than we can number or understand.

And yet so subtle are the suggestions of the human spirit in disparagement of its own powers—so near and ever-present to us is that region which belongs to the unsatisfied reserve of power—that the very fact of our knowledge arising out of our organic relations with the rest of nature has been seized upon as only casting new discredit on all that we seem to know. Because all our knowledge arises out of these relations, therefore, it is said all our knowledge of things must be itself relative; and relative knowledge is not knowledge of "things in themselves." Such is the argument of metaphysicians—an argument repeated with singular unanimity by philosophers of almost every school of thought. By some it has been made the basis of religious proof. By some it has been made the basis of a reasoned scepticism. By others it has been used simply to foil attacks upon belief. The real truth is that it is an argument useless for any purpose whatever, because it is not itself true. The distinction between knowledge of things in their relations and knowledge of things "in themselves" is a distinction without a meaning. In metaphysics the assertion that we can never attain to any knowledge of things in themselves does not mean simply that we know things only in a few relations out of many. It does not mean even that there may be and probably are a great many relations which we have not faculties enabling us to conceive. All this is quite true, and a most important truth. But the metaphysical distinction is quite different. It affirms that if we knew things in every one of the relations that affect them we should still be no nearer than before to a knowledge of "things in themselves." "It is

proper to observe," says Sir W. Hamilton, "that had we faculties equal in number to all the possible modes of existence, whether of mind or matter, still would our knowledge of mind or matter be only relative. If material existence could exhibit ten thousand phenomena—if we possessed ten thousand senses to apprehend these ten thousand phenomena of material existence, of existence absolutely and in itself we should then be as ignorant as we are at present."* The conception here is that there is something to be known about things in which they are not presented as in any relation to anything else. It affirms that there are certain ultimate entities in nature to which all phenomena are due, and yet which can be thought of as having no relation to these phenomena, or to ourselves, or to any other existence whatever. Now, as the very idea of knowledge consists in the perception of relations, this affirmation is, in the purest sense of the word, nonsense—that is to say, it is a series of words which have either no meaning at all or a meaning which is self-contradictory. It belongs to the class of propositions which throw just discredit on metaphysics—mere verbal propositions, pretending to deal with conceptions which are no conceptions at all, but empty sounds. The "unconditioned," we are told, "is unthinkable;" but words which are unthinkable had better be also unspeakable, or at least unspoken. It is altogether untrue that we are compelled to believe in the existence of anything which is "unconditioned"—in matter with no qualities—in minds with no character—in a God with no attributes. Even the metaphysicians who dwell on this distinction between the relative and the unconditioned admit that it is one to which no idea can be attached. Yet, in spite of this admission, they proceed to found many inferences upon it, as if it had an intelligible meaning. Those who have not been accustomed to metaphysical literature could hardly believe the flagrant unreason which is common on this subject. It cannot be better illustrated than by quoting the words in which this favorite doctrine is expressed by Sir William

Hamilton. Speaking of our knowledge of matter, he says: "It is a name for something known—for that which appears to us under the forms of extension, solidity, divisibility, figure, motion, roughness, smoothness, color, heat, cold," etc. "But," he goes on to say, "as these phenomena appear only in conjunction, we are compelled by the constitution of our nature to think them conjoined in and by something; and as they are phenomena, we cannot think them the phenomena of nothing, but must regard them as the properties or qualities of something that is extended, figured, etc. But this something absolutely and in itself—*i.e.*, considered apart from its phenomena—is to us as Zero. It is only in its qualities, only in its effects, in its relative or phenomenal existence, that it is cognizable or conceivable; and it is only by a law of thought which compels us to think something absolute and unknown, as the basis or condition of the relative and known, that this something obtains a kind of incomprehensible reality to us." The argument here is that because phenomena are and must be the "properties or qualities of something else," therefore we are "compelled to think" of that something as having an existence separable from any relation to its own qualities and properties, and that this something acquires from this reasoning a "kind of incomprehensible reality!" There is no such law of thought. There is no such necessity of thinking nonsense as is here alleged. All that we are compelled to think is that the ultimate constitution of matter, and the ultimate source of its relations to our own organism, are unknown, and are probably inaccessible to us. But this is a very different conception from that which affirms that if we did know or could know these ultimate truths we should find in them anything standing absolutely alone and unrelated to other existences in the universe.

It is, however, so important that we should define to ourselves as clearly as we can the nature of the limitations which affect our knowledge, and the real inferences which are to be derived from the consciousness we have of them, that it may be well to examine these dicta of metaphysicians in the light of specific

* "Lectures," vol. i. p. 145.

instances. It becomes all the more important to do so when we observe that the language in which these dicta are expressed generally implies that knowledge which is "only relative" is less genuine or less absolutely true than some other kind of knowledge which is not explained, except that it must be knowledge of that which has no relation to the mind.

There is a sense (and it is the only sense in which the words have any meaning) in which we are all accustomed to say that we know a thing "in itself" when we have found out, for example, its origin, or its structure, or its chemical composition, as distinguished from its more superficial aspects. If a new substance were offered to us as food, and if we examined its appearance to the eye, and felt its consistency to the touch, and smelled its odor, and finally tasted it, we should then know as much about it as these various senses could tell us. Other senses or other forms of sensation might soon add their own several contributions to our knowledge, and we might discover that this substance had deleterious effects upon the human organism. This would be knowing, perhaps, by far the most important things that are to be known about it. But we should certainly like to know more, and we should probably consider that we had found out what it was "in itself," when we had discovered farther, for example, that it was the fruit of a tree. Chemistry might next inform us of the analysis of the fruit, and might exhibit some alkaloid to which its peculiar properties and its peculiar effects upon the body are due. This, again, we should certainly consider as knowing what it is "in itself." But other questions respecting it would remain behind. How the tree can extract this alkaloid from the inorganic elements of the soil, and how, when so extracted, it should have such and such peculiar effects upon the animal body, these, and similar questions, we may ask, and probably we shall ask in vain. But there is nothing in the inaccessibility of this knowledge to suggest that we are absolutely incapable of understanding the answer if it were explained to us. On the contrary, the disposition we have to put such questions raises a strong presumption that the an-

swer would be one capable of that assimilation by our intellectual nature in which all understanding of anything consists. There is nothing in the series of phenomena which this substance has exhibited to us—nothing in the question which they raise which can even suggest the idea that all these relations which we have traced, or any others which may remain behind, are the result of something which can be thought of or conceived as neither a cause nor a consequence—but solitary and unrelated. On the contrary, all that remains unexplained is the nature and cause of its relations—its relations, on the one hand, to the elements out of which vegetable vitality has combined it, and its relations, on the other hand, to the still higher vitality which it threatens to destroy. Its place in the unity of nature is the ultimate object of our search, and thus unity is essentially a unity of relations, and of nothing else. That unity everywhere proclaims the truth that there is nothing in the wide universe which is unrelated to the rest.

Let us take another example. Until modern science had established its methods of physical investigation, light and sound were known as sensations only. That is to say, they were known in terms of the mental impressions which they immediately produce upon us, and in no other terms whatever. There was no proof that in these sensations we had any knowledge "in themselves" of the external agencies which produce them. But now all this is changed. Science has discovered what these two agencies are "in themselves;" that is to say, it has defined them under aspects which are totally distinct from seeing or hearing, and is able to describe them in terms addressed to wholly different faculties of conception. Both light and sound are in the nature of undulatory movements—in elastic media—to which undulations our organs of sight and hearing are respectively adjusted or "attuned." In these organs, by virtue of that adjustment or attuning, these same undulations are "translated" into the sensations which we know. It thus appears that the facts as described to us in this language of sensation are the true equivalent of the facts as described in the very different language of intel-

lectual analysis. The eye is now understood to be an apparatus for enabling the mind instantaneously to appreciate differences of motion which are of almost inconceivable minuteness. The pleasure we derive from the harmonies of color and of sound, although mere sensations, do correctly represent the movement of undulations in a definite order, while those other sensations which we know as discords represent the actual clashing and disorder of interfering waves. In breathing the healthy air of physical discoveries such as these, although the limitations of our knowledge continually haunt us, we gain, nevertheless, a triumphant sense of its certainty and of its truth. Not only are the mental impressions, which our organs have been so constructed as to convey, a true interpretation of external facts, but the conclusions, we draw as to their origin and their source, and as to the guarantee we have for the accuracy of our conceptions, are placed on the firmest of all foundations. The mirror into which we look is a true mirror, reflecting accurately and with infinite fineness the realities of nature. And this great lesson is being repeated in every new discovery, and in every new application of an old one. Every reduction of phenomena to ascertained measures of force; every application of mathematical proof to theoretical conceptions; every detection of identical operations in diverse departments of nature; every subjection of material agencies to the service of mankind; every confirmation of knowledge acquired through one sense by the evidence of another—every one of these operations adds to the verifications of science, confirms our reasonable trust in the faculties we possess, and assures us that the knowledge we acquire by the careful use of these is a real and substantial knowledge of the truth.

If now we examine the kind of knowledge respecting light and sound which recent discoveries have revealed to us, as compared with the knowledge which we had of them before these discoveries were made, we shall find that there is an important difference. The knowledge which we had before was the simple and elementary knowledge of sensation. As compared with that knowledge the new knowledge we have

acquired respecting light and sound is a knowledge of these things "in themselves." Such is the language in which we should naturally express our sense of that difference, and in so expressing it we should be expressing an important truth. The newer knowledge is a higher knowledge than the older and simpler knowledge which we had before. And why? Wherein does this higher quality of the new knowledge consist? Is it not in the very fact that the new knowledge is the perception of a higher kind of relation than that which we had perceived before? There is no difference between the two kinds of knowledge in respect to the mere abstract character of relativity. The old was as relative as the new; and the new is as relative as the old. Before the new discoveries sound was known to come from sonorous bodies, and light was known to come from luminous bodies. This was a relation—but a relation of the vaguest and most general kind. As compared with this vague relation the new relation under which we know them is knowledge of a more definite and of a higher kind. Light and sound we now know to be words or ideas representing not merely any one thing or any two things, but especially a relation of adjustment between a number of things. In this adjustment light and sound, as known to sense, do "in themselves" consist. Sound becomes known to us as the attunement between certain aerial pulsations and the auditory apparatus. Light becomes known to us as a similar or analogous attunement between the ethereal pulsations and the optic apparatus. Sound in this sense is not the aerial waves "in themselves," but in their relation to the ear. Light is not the ethereal undulations "in themselves," but in their relation to the eye. It is only when these come into contact with a prearranged machinery that they become what we know and speak of as light and sound. This conception, therefore, is found to represent and express a pure relation; and it is a conception higher than the one we had before, not because it is either less or more relative, but because its relativity is to a higher faculty of the intellect or the understanding.

And indeed, when we come to think of it, we see that all kinds of knowledge

must take their place and rank according to this order of precedence. For as all knowledge consists in the establishment of relations between external facts and the various faculties of the mind, the highest knowledge must always be that in which such relations are established with those intellectual powers which are of the highest kind. Hence we have a strictly scientific basis of classification for arranging the three great subjects of all human inquiry—the What, the How, and the Whence or Why. These are steps in an ascending series. What things are, how they come to be, and for what purpose they are intended in the whole system of nature—these are the questions, each rising above the other, which correspond to the order and the rank of our own faculties in the value and importance of their work.

It is the result of this analysis to establish that, even if it were true that there could be anything in the universe existing out of relation with other things around it, or if it were conceivable that there could be any knowledge of things as they so exist, it would be not higher knowledge, but infinitely lower knowledge than that which we actually possess. It could at the best be only knowledge of the "What," and that too in the lowest conceivable form—knowledge of the barest, driest, nakedest existence, without value or significance of any kind. And, further, it results from the same analysis that the relativity of human knowledge, instead of casting any doubt upon its authenticity, is the very characteristic which guarantees its reality and its truth. It results, further, that the depth and completeness of that

knowledge depends on the degree in which it brings the facts of nature into relation with the highest faculties of mind.

It must be so if man is part of the great system of things in which he lives. It must be so, especially if in being part of it he is also the highest visible part of it—the product of its "laws" and (as regards his own little corner of the universe) the consummation of its history.

Nor can there be any doubt as to what are the supreme faculties of the human mind. The power of initiating changes in the order of nature and of shaping them from the highest motives to the noblest ends—this, in general terms, may be said to include or to involve them all. They are based upon the ultimate and irresolvable power of will, with such freedom as belongs to it; upon the faculty of understanding the use of means to ends, and upon the moral sense which recognizes the law of righteousness, and the ultimate authority on which it rests. If the universe or any part of it is ever to be really understood by us—if anything in the nature of an explanation is ever to be reached concerning the system of things in which we live, these are the perceptive powers to which the information must be given—these are the faculties to which the explanation must be addressed. When we desire to know the nature of things "in themselves," we desire to know the highest of their relations which are conceivable to us; we desire, in the words of Bishop Butler, to know "the author, the cause, and the end of them."*—*Contemporary Review*.

SHORT NOTES ON ENGLISH POETS:

CHAUCER; SPENSER; THE SONNETS OF SHAKESPEARE; MILTON.

BY ALGERNON CHARLES SWINBURNE.

It was no unmemorable day in the history of English letters when Thomas Campbell, the Callistratus of Great Britain, undertook to select and comment on his "Specimens of the British Poets" with the hand which had given to England her only two great national

songs. No hand, it must have been thought, could be fitter for this only less glorious task; and with all its grave and many shortcomings his collection remains as yet unrivalled and unapproached, as the very flower of our too mani-

* Sermon "On the Ignorance of Man."

fold anthologies. A yet greater and heavier undertaking has in our own day been attempted and accomplished by a more thoughtful and sometimes a more trustworthy critic than Campbell. Having before this had occasion to remark in terms of somewhat strong deprecation on the principle adopted by Mr. William Rossetti in his revision and rearrangement of the text of our greatest lyric poet, I am the more desirous to bear witness to the elevation and the excellence of his critical workmanship in this wider and more general field. On some points I differ gravely from his estimate; once or twice I differ from it on all points; but on the whole I find it not acceptable merely but admirable as the very best and most sufficient ever yet given of some at least among the leading names of our poets.

Four of these are by him selected as composing the supreme quadrilateral of English song. It is through no lack of love and reverence for the name of Chaucer that I must question his right, though the first narrative poet of England, to stand on that account beside her first dramatic, her first epic, or her first lyric poet. But, being certainly unprepared to admit his equality with Shakespeare, with Milton, and with Shelley, I would reduce Mr. Rossetti's mystic four to the old sacred number of three. Pure or mere narrative is a form essentially and avowedly inferior to the lyrical or the dramatic form of poetry; and the finer line of distinction which marks it off from the epic marks it also thereby as inferior.

Of all whose names may claim anything like equality of rank on the roll of national poets—not even excepting Virgil—we may say that Chaucer borrowed most from abroad, and did most to improve whatever he borrowed. I believe it would be but accurate to admit that in all his poems of serious or tragic narrative we hear a French or Italian tongue speaking with a Teutonic accent through English lips. It has utterly unlearned the native tone and cadence of its natural inflections; it has perfectly put on the native tone and cadence of a stranger's; yet is it always what it was at first—*lingua romana in bocca tedesca*. It speaks not only with more vigor but actually with more sweetness than the

tongues of its teachers; but it speaks after its own fashion no other than the lesson they have taught. Chaucer was in the main a French or Italian poet, lined thoroughly and warmly throughout with the substance of an English humorist. And with this great gift of specially English humor he combined, naturally as it were and inevitably, the inseparable twin-born gift of peculiarly English pathos. In the figures of Arcite and Grisilde he has actually outdone Boccaccio's very self for pathos: as far almost as Keats was afterward to fall short of the same great model in the same great quality. And but for the instinctive distaste and congenital repugnance of his composed and comfortable genius from its accompanying horror, he might haply have come nearer than he has cared or dared to come even to the unapproachable pathos of Dante. But it was only in the world of one who stands far higher above Dante than even Dante can on the whole be justly held to stand above Chaucer that figures as heavenly as the figures of Beatrice and Matilda could move unspotted and undegraded among figures as earthly as those of the Reve, the Miller, and the Wife of Bath; that a wider if not keener pathos than Ugolino's or Francesca's could alternate with a deeper if not richer humor than that of Absolon and Nicholas.

It is a notable dispensation of chance that the three great typical poets of the three great representative nations of Europe during the dark and lurid lapse of the middle ages should each afford as complete and profound a type of a different and alien class as of a different and alien people. Vast as are the diversities of their national and personal characters, these are yet less radical than the divergences between class and class which mark off each from either of his fellows in nothing but in fame. Dante represents, at its best and highest, the upper class of the dark ages not less than he represents their Italy; Chaucer represents their middle class at its best and wisest not less than he represents their England; Villon represents their lower class at its worst and its best alike even more than he represents their France. And of these three the English middle class, being incomparably the

happiest and the wisest, is indisputably, considering the common circumstances of their successive times, the least likely to have left us the highest example of all poetry then possible to men. And of their three legacies, precious and wonderful as it is, the Englishman's is accordingly the least wonderful and the least precious. The poet of the sensible and prosperous middle class in England had less to suffer and to sing than the theosophic aristocrat of Italy, or the hunted and hungry vagabond who first found articulate voice for the dumb longing and the blind love as well as for the reckless appetites and riotous agonies of the miserable and terrible multitude in whose darkness lay dormant, as in a cerecloth which was also a chrysalid, the debased and disfigured godhead which was one day to exchange the degradation of the lowest populace for the revelation of the highest people—for the world-wide apocalypse of France. The golden-tongued gallows-bird of Paris is distinguished from his two more dignified compeers by a deeper difference yet—a difference, we might say, of office and of mission no less than of genius and of gift. Dante and Chaucer are wholly and solely poets of the past or present—singers indeed for all time, but only singers of their own; Villon, in an equivocal and unconscious fashion, was a singer also of the future; he was the first modern and the last mediæval poet. He is of us in a sense in which it cannot be said that either Chaucer or Dante is of us, or even could have been; a man of a changing and self-transforming time, not utterly held fast, though still sorely struggling, in the jaws of hell and the ages of faith.

But in happy perfection of manhood the great and fortunate Englishman almost more exceeds his great and unfortunate fellow-singers than he is exceeded by them in depth of passion and height of rapture, in ardor and intensity of vision or of sense. With the single and sublimer exception of Sophocles, he seems to me the happiest of all great poets on record; their standing type and sovereign example of noble and manly happiness. As prosperous indeed in their several ages and lines of life were Petrarch and Ariosto, Horace and Virgil; but one only of these im-

presses us in every lineament of his work with the same masculine power of enjoyment. And when Ariosto threw across the windy sea of glittering legend and fluctuant romance the broad summer lightnings of his large and jocund genius, the dark ages had already returned into the outer darkness where there is weeping and gnashing of teeth—the tears of Dante Alighieri and the laughter of François Villon. But the wide warm harvest-field of Chaucer's husbandry was all glorious with gold of ripening sunshine while all the world beside lay in blackness and bonds, throughout all those ages of death called ages of faith by men who can believe in nothing beyond a building or a book, outside the codified creeds of a Bible or the œcumenical structures of a Church.

Before I take my reverent leave of Chaucer I will express, in passing, a slight sense of regret that Mr. Rossetti should not have added to his notice of the "Troilus and Cryseide"—a choice passage of exquisite analysis and panegyric, with every word of which I most cordially concur—some little note of applause for the Scottish poet Henryson's equally adventurous and admirable sequel to that poem. For truth and power of pathetic imagination, the last meeting of Troilus with the wayside leper who once had all his heart, and played it all away at the May game of light love, may be matched against the very best work of Chaucer; nor do I remember anything in it all so deeply and truly tragic as the doom of the transformed and disfigured traitress who, meeting no recognition in the eyes of her old lover as he looks on her and sighs and passes, with an alms thrown sadly as to a stranger, falls back and dies in silence.

The earnest search or labor after righteousness of judgment and absolute accuracy of estimate which always, whether it may finally succeed or fail, distinguishes the critical talent of Mr. Rossetti, is very happily exemplified in his analysis and summary of the aims and the claims of Spenser. His judgment or his sentiment on this matter may be said to strike a balance between the enthusiastic devotion of Scott and Southey, Ruskin and Leigh Hunt, and the wearied indifference or positive dis-

taste of Landor. As a descendant of the great Latin race, he has naturally by way of birthright the gift which he is bound to have, an inborn sense of rule and outline which makes him instinctively aware of Spenser's shortcoming on that side, and logically averse from the luminous and fluid nebulousity of Spenser's cloudy and flowery fairyland. The lack of tangible form and line, of human flesh and breath and blood on the limbs and at the lips and in the veins of Spenser's active or passive and militant or triumphant congregation of impersonated virtues and vices, is inevitably perceptible to a scholar and evangelist of Dante, who must perforce be unconsciously inclined to measure all poets more or less after the standard of the mighty master whose missionary he was born by right at once of inheritance and of intelligence. Dante was beyond all other poets a materialist; and this, I have heard it remarked, is of course what Blake meant to convey by the quaint apparent paradox of his essentially accurate objection to the "atheism" (as he called it) of Dante, with whom the finest forms of abstract qualities that the scholastic ingenuity of mediæval metaphysicians could devise and define became hard and sharp and rigid as tempered steel. Give Dante a moral image, he will make of it a living man; show Spenser a living man, he will make of him a moral image. It is not to the existence of allegory in Spenser that all save his fanatical admirers object; it is to the fact that this allegory, like Mrs. Malaprop's "on the banks of the Nile," is a rapacious and insatiable impostor who attracts and devours all living likenesses of men and women within reach. There is allegory also in Homer and in Dante; but prayers in Homer and qualities in Dante become vital and actual forms of living and breathing creatures. In Spenser the figure of a just man melts away into the quality of justice, the likeness of a chaste woman is dissolved into the abstraction of chastity. Nothing can be more alien from the Latin genius, with its love of clearness and definite limitation, than this indefinite and inevitable cloudiness of depiction rather than conception, which reduces the most tangible things to impalpable properties, resolves the

solidest realities into smoke of perfumed metaphor from the crucible of symbolic fancy, and suffuses with Cimmerian mist the hard Italian sunlight. Add to this the cloying sweetness of the Spenserian metre, with all "its treasures of fluidity and sweet ease" (as Mr. Arnold, with his usual studious felicity of exquisite phrase, has so perfectly described it), which leaves at least some readers, after a dose of a few pages, overgorged with a sense that they have been eating a whole hive's harvest of thick pressed honey by great spoonfuls, without one halfpennyworth of bread to this intolerable deal of sweet-stuff; and it is easy to determine why the attraction of this noble poet, for all his luminous color and lovely melody, the raiment of high thinking and fine feeling, is perhaps less potent than it should be over minds first nurtured on the stronger fare of Greek or Latin or Italian song. The Tarpeian Muse of Spenser is not indeed crushed—there is too much vigorous and supple vitality in her lovely limbs for that—but she is heavily burdened if not sorely bruised by the ponderous and brilliant weight of allegoric shields, emblazoned with emblematic heraldry of all typical and chivalric virtues, which her poet has heaped upon her by way of signs and bucklers of her high and holy enterprise in "fairy lands forlorn," through twilight woodlands and flowery wastes of mythical and moral song. With almost equal truth he might be said to have founded and to have followed the fashion of allegorical poetry which in the next generation ran riot through the voluminous verse of his disciples till it reached its head, not even in the works of the two lesser Fletchers, but—as if the names of our dramatic Dioscuri were foredoomed to poetical conjunction and unconscious fellowship on far other ways than theirs—in the limitless and lampless labyrinth of Joseph Beaumont's "Psyche." Allegory was no doubt a powerful factor to be reckoned with in casting up the account of English poetry before Spenser; but in the allegories of his most notable precursors down to Sackville there is surely as much more of body, of tangible and palpable outline, than in his, as there is less of it in any of his followers. I cannot, therefore, but think that the great influence

of Spenser on succeeding poets whose lines of work lay outside the fields of lyric and dramatic verse was far from being good as well as great. Outside those fields there was no man—unless a not very significant exception be claimed for Drayton and for Daniel as narrative chroniclers of some small and partial note—there was no man till the sundawn of Milton who could make head for a moment against that influence. The one great poet who might have done this also as well as the work he did—the yet worthier and surely far mightier work of founding the tragic stage of England—had only time to leave us a broken sample of nobler narrative and purer power than Spenser's, in the unimitated if not inimitable model of his "Hero and Leander." And all who came after them found it easier to follow the discursive and decorative style of Spenser than the more "simple, sensuous, and passionate" manner of Marlowe.

Mr. Rossetti's critical memoir of Shakespeare is in its kind a most absolute and masterly model of simple and sufficient workmanship. The little all we know concerning the master of us all who know aught of English song is here arranged and explained with blameless care and fine lucidity of brief yet full remark. I observe only one seeming slip of memory or passing lapse of attention; his oversight of the generally noticed and obviously noticeable fact that the very first line of the anti-Lucian doggerel affixed by tradition to the gate of Charlecote Park with the apocryphal hand of Shakespeare bears the stamp on it of forgery, in the linguistic anachronism of the title or titles therein bestowed on Sir Thomas.

But the central jewel of this excellent essay, and the crowning glory of this admirable book, is the commentator's summary of opinion as to the subject and significance of the sonnets. What Coleridge, under the kindly influence of a far too indulgent mood, said "in his haste" of Weber's Beaumont and Fletcher may with simple justice be said of Mr. Rossetti's brief and perfect bit of work upon this difficult matter. We owe to him, "I will not say the best—for that would be saying little—but a good" commentary on the sonnets of

Shakespeare. I speak here especially of "the second and shorter," but (as Mr. Rossetti does not, perhaps, sufficiently observe or emphasize) incomparably the more important and altogether precious "division of the sonnets." Upon this question it seems to me that he, and he alone among all commentators of whom I know anything, has seen and spoken, as far as is now, or, perhaps, ever was possible to see and speak, "the truth, the whole truth, and nothing but the truth." I do not care—he said with all genuine and cordial respect—to follow him any more than others into the fruitless and thorny ground of word-splitting debate as to the discernible personality of one will or two wills on whose name the greatest man who ever bore it has once and again rung fantastic changes of quibbling and smiling rhyme; what I recognize and what I would indicate as worthy of all praise is the writer's own recognition of the plainly probable truth, expressed in a terse and luminous exposition of the apparent evidence; to the surely quite simple and natural effect that the younger friend whom Shakespeare loved with such a tender and passionate admiration of his noble and attractive qualities—his inward and outward, casual and essential endowments of mind and person—as could only be possible to a man of radically noble and high-minded nature, and could only express itself after the ardent fashion of the sonnets in the single age and generation of Shakespeare, did wilfully or involuntarily seduce from him the not invaluable affections of a paramour who had for some time obtained a hold upon the mind as well as the senses of Shakespeare which he felt to be injurious and unworthy of his better instincts, knowing that the ill-requited affection which he bore to the friend who had won from him her heart or her fancy was yet a wiser and worthier feeling than the perverse and reluctant passion which still attracted him toward the malign and dangerous beauty of their common mistress; in a word, that the man's friendship, however far he might have been led astray by the temptress from its honest and straightforward course, was better worth his keeping or regretting than such love as could be given to either by

such a woman. So chaotic and comfortless a result of Shakespeare's ultimate relations toward a mistress and a friend may be deplorable enough for sympathetic worshippers of his genius to contemplate, but is surely neither unprecedented nor unparalleled nor improbable in itself. And we have the combined evidence of all tradition and of all his later works to show that Shakespeare, however hard he may have had to swim for a time against this sea of personal troubles, did long before his latter days succeed in taking better arms against them than those of suicide, and did, after some fashion worthier of himself, in time by opposing end them.

A name so illustrious has recently been added to the list of theirs who dispute or deny the supposition that even in his sonnets the most inscrutably impersonal of poets did actually "unlock his heart," that it might seem negligent if not insolent to take no account of such antagonism to the opinion which to me seems so clearly just and right. Mr. Browning, perhaps in all points the farthest removed from Wordsworth of all poets in this century, cites with something of a sneer the well-known expression of Wordsworth which gives us his opinion to that effect, and, as if scornfully rejecting a supposed suggestion that he also should do likewise, retorts in a tone of assured defiance—

"Did Shakespeare? If so, the less Shakespeare he!"

No, I must venture to reply; no whit the less like Shakespeare, but undoubtedly the less like Browning. In the dedication of "Luria" and "A Soul's Tragedy" the exact distinctive quality of the immortal man to whom those noble plays are dedicated was defined with admirable accuracy; Landor is "a great dramatic poet," as opposed to a great dramatist; and they are not the least ardent and studious admirers of Mr. Browning himself who think that the same distinctive definition is not less accurately applicable to his own genius also. Now, even in default of his personal and articulate evidence to that effect, we should have guessed that Mr. Browning was in no wise wont to unlock his heart with any metrical key to any direct purpose—except, as it might

be, "for once," when exchanging, to such noble purpose, a "bronze" for a "silver" instrument. But Shakespeare, not being simply "a great dramatic poet" like Browning or like Landor, but a great dramatist in the most absolute and differential sense of the phrase, might on that very account (it seems to me) be the likelier and the more desirous, under certain circumstances which for us must be all uncertain, to relieve and disburden his mind—to unload his heart rather than to unlock it—in short personal poems of a kind as alien from the special genius or spiritual instinct of Mr. Browning as the utterly impersonal gift of impersonations, not in one form at a time but in many forms at once, by dint of more than dramatic renunciation or annihilation of himself, which makes him the greatest of all dramatists as surely as he is not the greatest of all dramatic poets.

Of Milton Mr. Rossetti speaks with less ardent reverence than might be expected from a republican, though not, it must be owned, than might have been expected from a disciple of Dante. For it is a notable and even deplorable fact that there is one great poet—though happily there is but one—whose disciples would seem to be disqualified by the fact of their discipleship from equal or due appreciation of almost any other. A Shakespearean adept may be a Miltonic believer; a worshipper of Homer or Æschylus, of Sophocles or Lucretius, may be a devout and loyal student of both our supreme Englishmen; but Dante would seem to be as jealous a God as he of the Jews in his most exacting and exclusive mood of monarchy. All his disciples "continually do cry," in direct or indirect fashion,

οὐκ ἀγαθὸν πολυκοιρανίῃ· εἰς κοίρανός ἐστις,
εἰς βασιλεὺς·

and his name is Alighieri. For these Unitarians or Mohammedans of Parnassus there is but one muse, and Dante is her prophet. If we would not be reprobate in their eyes we must accept and worship as they do the idol, the whole idol, and nothing but the idol; we must not stop our noses in hell with loathing, nor distend our jaws with yawning in heaven; neither may we worship any other God. Most especi-

ally may we not offer sacrifice to any other great Christian or cosmogonic poet; for in him is the whole and sole theogony revealed by spiritual song. This is a hard saying, and I for one cannot hear it.

If indeed the inevitable question of spiritual value and intellectual insight were to be followed out to such length and depth as alone would suffice for discussion of the relations or adjustment of the balance between these two great Christian poets, and for examination of their respective worth and weight as readers and interpreters of "the sovereign scheme and divine riddle," it would be necessary to go further; to pass out of the atmosphere of their Catholic or Calvinistic theologies and theogonies, and confront the supreme results of poetic wisdom under the influence of Christian doctrine, and within the precincts of Christian discipline, with those of the same spiritual power when working under far other conditions in the native sphere of free contemplation and solemn inquisition into natural mystery more sacred and more strange than all supernatural miracle. Immeasurably beyond contemplation of any Christian poet's capacity is the awfulness of evil and expiation as symbolized in the Sophoclean grove of the Furies. But, at the ovens and the cesspools of Dante's hill, the soul, if the soul had fingers, would snap them. The perpetuation of the infinitely little for a perpetuity of infinitely mean suffering, the degradation of eternity by the eternity of degradation, in brutal and obscene horror of abject wickedness and abject anguish, is a conception below the serious acceptance of the ancient or the modern mind—fit only for the dead and malodorous level of mediæval faith.

A single sentence of Mr. Rossetti's essay sums up in fourteen emphatic and expressive words the whole side or aspect of his opinion or feeling on the subject of Milton to which I cannot choose but take exception. "Honor," he says, "is the predominant emotion naturally felt toward Milton—hardly enthusiasm—certainly not sympathy." In that case I am simply unable by any stretch of conjecture to imagine what name among all names of patriots or of

poets may be found worthy to enkindle this enthusiasm which the mention of Milton's has left cold. Sympathy, indeed, we may well feel that we are hardly worthy to offer, for the very word implies some assumption of moral or spiritual equality; and he must indeed be confident of having always acted up to Milton's own ideal, and ever "made of his own life a heroic poem," who remembering this could think himself worthy to feel sympathy with the action and the passion of such lives as Milton's or Mazzini's. More reasonably may we feel, as it were, a righteous and a reverent delight in the sense of an inferiority which does not disable or deprive us of the capacity for adoration, a rapture of lowliness which exalts humility itself into something like the gladness of pride—of pride that we can feel and exultation that we may acknowledge how high above us are men who yet are not too high for the loyal thank-offering, not only of our worship, but surely also of our love.

Again, I must object that "to appraise Milton" is not merely "to appraise 'Paradise Lost';" nor, "conversely," can I admit that "to appraise 'Paradise Lost' is in the main," by any manner of means, "to appraise Milton." His own preference, actual or traditional, relative or positive, for "Paradise Regained" is not properly to be dismissed with the conventional expression of astonishment at the unaccountable "perversity" of its author's opinion. Much might be advanced in support or vindication of a judgment which should assign to it the higher place as a poem or complete work of art, while of course reserving for "Paradise Lost" the claim of priority in episodic excellence—in splendor of separate points and exaltation of separate passages. In the central and crowning quality of harmonious and blameless perfection, the *Iliad* is not more excelled by the *Odyssey* than is "Paradise Lost" by "Paradise Regained." In either case the name of the elder poem first of all reminds us of its noblest episodes; the mention of the younger brings back upon us before anything else the serene and supreme impression of the final whole. If this, as we may well believe, was all that Milton ever said or

implied in his avowal of preference for the second child of his old age, he said no more than seems to my poor judgment absolutely just and right—as right as might reasonably be expected by men reasonable enough to perceive, and modest enough to acknowledge, the flagrant falsity and the impudent absurdity of the favorite opinion that a great man is probably not the best judge—if, indeed, he be not naturally the worst judge—as to the respective worth of his several great works.

Of all the leading poems which glorify our language none has ever been subjected to such perverse persistency of misjudgment as that which to some students may, from its proper point of view, not unworthily present itself as the master-work of Milton. From Dr. Johnson or from Lord Macaulay we are not surprised to hear the note of condemnation uttered in the key peculiar to either critic; but it is something more than singular to find this most majestic and pathetic of all Milton's works passed over without a word of comment attached to the naked mention of its name. And we cannot turn without keen disappointment from the admirable definition given by Mr. Mark Pattison of "*Samson Agonistes*" as "the intensest utterance of the most intense of English poets," to the stupefying incongruity of his subsequent admission that "as a composition the drama is languid, nerveless, occasionally halting, never brilliant;" nay, that the "intense action of the presentative faculty is no longer at the disposal of the writer of '*Samson*'" (a hardly happy expression of a most unhappy judgment). "The simplicity of '*Samson Agonistes*' is" anything but "a flagging of the forces, a drying up of the rich sources," and so forth. Of all other illustrious Englishmen the worthiest to applaud and the fittest to judge of Milton has borne heavily enough on some few sufficiently apparent shortcomings in the executive details of this heroic tragedy; but no other of all the most glorious among our countrymen could have paid to the crowning work of Milton such a tribute as this of Landor's.

"Reminiscences of many sad afflictions have already burst upon the poet, but instead of overwhelming him they

have endued him with redoubled might and majesty. Verses worthier of a sovran poet, sentiments worthier of a pure, indomitable, inflexible republican, never issued from the human heart than these" (v. 265-277), "referring to the army, in the last effort made to rescue the English nation from disgrace and servitude."

It is the fashion of our day to look for the typical man or representative figure of the English Commonwealth not so much in the poet who glorified as in the dictator who destroyed it. This is but natural and consistent in such historians as see nothing in the record of our short-lived republic worth admiration or regret but the triumph of a more harsh and earnest form of superstition over one somewhat less hellish in its cast of creed and greatly more graceful in its tone of life, accompanied by the substitution of a stern and steady system of dictatorial rule for the lax and trustless impulse of a treacherous and shifting tyranny; but those whose faith or feeling in the matter of historic patriotism lies deeper than a mere preference for competent over incompetent autocracy must perceive, or at least will believe, that the restoration which they admire as little as any military-minded Neo-Calvinist or Muscovitic imperialist of their time was not so much the doing of James Monk as the work of Oliver Cromwell: a consummation of catastrophe directly rather than indirectly due to the weakness and selfishness of the nominal and temporary protector, the actual and final destroyer, of the commonwealth of England. For surely the dying hand which put into Richard Cromwell's the sceptre of its sway put by that act the crown of England into Monk's for delivery into Charles the Second's. And this, if we never have learned it from the evidence of Milton himself, we may learn with equal confidence from Landor's that Milton surely saw. "He had grown calmer at the close of life, and saw in Cromwell as a fault what he had seen before as a necessity or a virtue." And therefore is it rather in the loftier, purer, more loyal and more liberal virtue of its poet, than in the dubious and double-faced majesty of its august and imperious dictator, that we should salute the highest and most

perfect type of the English republic ; dragged down into his own grave by the fatal dead hand of Cromwell, yet surviving after a sort in the figure of the blind man "left upright"*—in the phrase of a poet as glorious and a republican as faithful as himself—on the verge and in the shadow of her sepulchre.

In private matters, or such as belong to the range of ethics rather than of politics, the instinct of Milton seems to me as much truer and finer than the instinct of Dante as his judgment and his conscience were juster, sounder, purer than the conscience or the judgment of Cromwell. Only those disciples in whom congenital idolatry has passed into the stage of acute monomania can maintain that the quality of Dante's great work is never in any considerable degree impaired by the incessant invasion of merely personal polemics; that the reader is never, or but rarely, fatigued and nauseated by the obtrusion and obsession of "verminous fellows," whom the higher muses at least should be content to leave in the native and natural shelter of that obscene obscurity which alone is proper to such autocoprophagous animalcules as make the filth they feed on. There are others beside the "brothel lackeys" of a bastard empire who, as Victor Hugo said once, would desire us to shut our eyes, but compel us to stop our noses.

No matter what manner of offence may naturally be given by creatures whose very nature is offensive, a man who is duly and soberly conscious of any reason for self-respect will ultimately, as Milton did and Dante did not, determine that personal insolence, whether masked as Caliban or manifest as Thersites, shall draw down no further notice from his hand or foot. There are things unmentionable save by a too faithful pupil or too literal imitator of Swift, which, only for our own sake, we are careful not to spurn as we step over them. Upon such Milton did not hesitate to set his heel, when duly guarded

by the thick-soled boot of prose ; but, unlike Dante, he never permitted the too fetid contact of their stercorous feculence to befoul the sandal of his muse. The reddening knots of his controversial scourge fell only in cadences of prose, or at least but very rarely in brief reverberation of rhythmic numbers, on the noisome nudity exposed as in provocation of its lash by Saumaise or du Moulin, the literary lackey of a princeling or the cryptonymous railer for his bread.

This high-souled and haughty respect for the dignity of his natural art should be duly borne in mind whenever we are tempted to dwell somewhat disapprovingly on Milton's indefatigable and fierce delight in "double-thonging" such equivocal sons of a dubious kennel ; though it will not be denied that he spent more strength of arm than he need have wasted on the resonant reiteration of stripes from a deserved but superfluous dog-whip, too constantly sent curling about their currish flanks.

It is certainly no very dignified amusement, no very profitable expenditure of energy or time, to indulge in the easy diversion of making such curs yelp, and watching them writhe under the chastisement which an insulted superior may condescend to inflict, till their foul mouths foam over in futile and furious response, reeking and rabid with virulent froth and exhalations of raging ribaldry. Yet when, like those that swarmed at the heels of Milton, the vermin venture on all possible extremes of personal insult and imputation to which dulness may give ear or malice may give tongue, a man cannot reasonably be held to derogate from the duty and the dignity of self-respect if he spurns or scourges them out of his way. To give these rascals rope is a needless waste of hemp ; a spider's thread, spun from the inner impurity of his own venomous vitals, will suffice for such a creature to hang himself.

A ground more plausible may seem to exist for a graver charge against Milton than that of a ferocious condescension to take unmerciful notice of such leprous little malignants as these ; for the charge of relentless and unmitigable savagery toward the dead, whose misdoings might seem—or to us may seem at this distance—to have been amply expiated

* La République anglaise expire, se dissout, Tombe, et laisse Milton derrière elle debout :

La foule a disparu, mais le penseur demeure ;

C'est assez pour que tout germe, et que rien ne meure.

Victor Hugo, "L'Année Terrible," Prologue.

by discomfiture and death. Cheap and not over-nice chivalry—the false Florimel who assumes and degrades the appearance of true knightliness of mind and sound nobility of spirit—is ever ready, when tyrants are fallen or when traitors are degraded, to remind us in the shrillest note of reproachful impertinence that “it is ill boasting over dead men.” Ill indeed, and worse than ill, it is when those who could see nothing to blame in Nero, nothing to loathe in Judas, till the moment of ruin which reduced them to suicide, begin to cast stones at the carrion which had been found worthy of their adoration when a pontiff, of their adulation when an emperor. But ill it would also be, abominable and absurd, if the “piteous and unpitied end” of either were to be held as expiation sufficient to reverse the branding judgment or silence the damning voice of history or of poetry; to bid those now be silent out of pitiable pity and hypocritical high-mindedness who did not hesitate, while some among the posthumous revilers as well as the posthumous champions of these wretches were prone before the vilest of all idols on their knees like the courtier or on their bellies like the serpent, to call Judas by his name of Iscariot and Nero by his name of Bonaparte.

The self-confident and self-conscious majesty of Milton's devotion and dedication to their natural work of all the faculties assigned to him by nature has foolishly enough been objected against him as evidence of his poetic inferiority to Shakespeare. With that unapproachable name no rational man will assert the equality of Milton's; but if Shakespeare's claim to superiority rested only on the evidence of his intellectual self-effacement, his modest unconsciousness and humble-minded abnegation or ignorance of his right to put forward any claim whatever, it would be but too easy a task to convict him out of his own mouth, and prove by the avowal of his own pretensions that he can pretend to the credit of no such imbecility. No sandier foundation was ever discovered for a fallacy more futile than this. No

man ever lived who had less title than Shakespeare to whatever blessing may be reserved for the poor in spirit. Not even Milton, not even Dante, had less right to say in appeal to God or man, “I am not high-minded.” No man's writings bear witness more unquestionable that he worked and waited with the haughty patience of self-assured expectation for the inevitable homage of mankind in centuries to come.

Had we no evidence to this effect—as happily we have much—beyond the affirmation and proclamation in sonnet after sonnet of his own intellectual rank and spiritual prospect, it would be vain to advance against their evidence alone the doubtless irrefragable proposition “that somewhat similar expressions were used by other sonnetteers, and [that] they formed almost a commonplace of sonnet-literature.” Not less on this than on every other point the peculiar note of personal earnestness which pervades the leading sonnets of Shakespeare is unmistakable by the eye and ear of all “save bats and owls.” That the eye and the ear of Mr. Rossetti belong to neither of these far too extensive literary classes, the following excerpt from his own text bears eloquent and triumphant witness.

“The trumpet-tone of all these lines is wondrously inspiring; they express a perfect and splendid confidence. That Shakespeare, who led an inconspicuous life, and took no heed for the preservation of any of his writings later than the *Venus and Adonis* and the *Lucrece*,* should yet have known with such entire certainty that they would outlive the perishing body of men and things till the Resurrection of the Dead—this is the most moving fact in his extant history: the one which informs with grandeur of being, and reconciles into a potent unity, the residual elements of his career, sparse and disparate at best, sometimes insignificant or incongruous-looking.”

These words themselves deserve to put on immortality; there are none truer or nobler, wiser or more memorable, in the whole historic range of highest criticism.—*Fortnightly Review*.

* This, I must object, is a much more than dubitable assumption.

COINAGES OF THE BRAIN.

BY ANDREW WILSON, PH.D.

THE means whereby we are enabled to form conceptions and judgments of the outer world, and of our own relations thereto, form the subject-matter of the most elementary study in the physiology of nerves. But as the understanding of the deepest problems often depends on the correctness of our primitive studies and on the soundness of the beginnings of knowledge, it may be well that, in studying the work of the brain, we should very briefly glance at the manner and method in which body or outer world usually acts upon mind, and mind in turn upon the frame it controls. Such a simple study in sensation will suffice to introduce us to some interesting phenomena of mind; and these last may prove of some service, even if they may but aid us in some degree to comprehend the nature and ways of our own being.

When, under ordinary circumstances, an impression from the external world reaches the outward parts of our nervous system, or passes through one of those "gateways of knowledge" which we term an organ of sense, it is transmitted in due course to a special part of the nervous system named a nerve-centre. There the impression gives rise to actions or processes which result in the production of a "sensation," and commonly also of "consciousness"—that is, the knowledge of the why and wherefore of our acts and feelings. Apart from metaphysical vagaries and subtleties, this much seems clear—that any simple sensation, starting like an electric current from the outer world, and passing along the wires we term nerves, to the head office or brain, gives rise therein to responsive feelings, and, it may be, to corresponding and related actions in the body as well. Example is more potent than precept; let us therefore turn to the study of a common sensation such as that of touch, by way of illustrating the ways and methods of the ordinary government of life. A person aims a blow at our head, and that important region is quickly, and we may add automatically, withdrawn from

the threatened contact with the malcontent. The explanation of our action is perfectly clear. The impression of the moving fist was caught by the eye, was modified by its passage in the form of light-rays through that organ, was converted into a "sensation," was transmitted through a special (optic) nerve to the brain, was therein firstly transferred to some special region of the seat of mind, and finally gave rise to the "consciousness" or thought of the danger which threatened our person. Now all of these actions took place so quickly that their accurate analysis might well seem to be impossible. Still the sequence of events proves the accuracy of the statement that the seat of knowledge, and in this case the power of acting or walking by sight, is resident in some part of the brain, to which it is the function of the eye and optic nerve together to convey the impressions and sensations on which our knowledge depends. But the effects of the threatened blow end not thus with the declaration of "information received" emanating from the brain. Like an active and efficient official, the brain is prone to act upon such intelligence. The head is withdrawn from the blow, the body itself is removed, it may be some paces backward; and unless discretion be deemed the better moiety of valor, there may be responsive and co-ordinated muscular actions of hands, arms, and possibly of legs or feet as well, wherewith swift and sure retaliation may be made upon the sensiferous organs and most tangent regions of our antagonist. In other words, if an impression has been received *by* the brain, it is no less plain that another—or it may be several—impressions have issued *from* the seat of mind. These have radiated, as directed by the brain, to the muscles of our head and neck, and to those of our limbs; and our subsequent movements are the result of this secondary brain-act which follows upon the reception of the previous impression. Thus we begin to understand that in their nature ordinary nervous acts are really double,

and that all our ordinary acts and our extraordinary actions as well are regulated by a kind of duplex telegraphy on the part of the nervous system; while it becomes apparent that even the confused heat and bustle of a severe scrimmage—or the whirling maze of heads, hats, and coat-tails which are popularly believed to constitute an enlivening feature of festivals of which Donnybrook remains the type—may, through a patient scientific inquiry, be resolved into so many sensations received and acted upon through the system of mind-telegraphy just described.

It remains, therefore, a plain doctrine of modern physiology that our knowledge of the outer world is received and acted upon through a very definite system of actions and reactions. True, we do not know what constitutes an impression. We have measured the rate at which nerve-force travels, but the exact nature of this force is unknown. Consciousness—and the reception of impressions by the brain—has not advanced materially in explanation since Hartley, in his "Observations on Man," spoke of the "vibrations of the small, and, as we may say, infinitesimal medullary particles," which he conceived further to be "motions backward and forward of the small particles" of the brain, and to present a similarity to "the oscillations of pendulums, and the tremblings of the particles of sounding bodies." And of what takes place in the brain when the impression from the outer world is converted into that proceeding from brain to body and to the outer world again, we are likewise in the depths of ignorance. But despite our inability to read between the lines of the brain-work, the general nature of nerve-action remains as a clear and patent basis for further research. Nervous acts are now spoken of in physiology as being founded on the grand principle of "reflex action," with the name of which every schoolboy is familiarized by his physiology-primer. The ordinary acts of living and being are regulated on this duplex system. An impression (which we call *afferent* or *sensory*) travels inward to the brain or other centre, and is there converted into another impulse (named *efferent* or *motor*), which passes outward to muscles, to glands, to other organs,

or it may be to some other part of the brain itself. The original impression or sensation is thus "reflected," as it were, from a nerve-centre to some other organ or part. The sensation of withdrawal from danger, to which the threatened blow gives rise in the brain, was duly "reflected," and thus passed onward to the head and neck-muscles, and, in the case of practical retaliation, to the muscles of the limbs. So that, in this view of matters, the brain may be regarded as largely performing the functions of a complex "clearing-house," where the varied business concerns of the frame are assorted, parcelled out, rearranged, and finally transmitted to their proper destinations.

Other examples of this duplex system, and of the power of the head-centre of the nervous system to receive and retransfer impressions and sensations, may throw a further light upon some special features and noteworthy characteristics of its action. Select, for instance, the sensation of touch, and we shall have forcibly impressed upon our understanding the fact that the brain or sensorium is the true and actual seat of knowledge. This latter truism, plain as it may appear, is not usually appreciated until the attention has been directly called thereto. It is needful, in truth, for the correct understanding of the evolution of mind-phantasies and illusions, that such a truth should be continually present in all its plainness to the mind. We touch a table, and the *rationale* of the nervous acts therein implied is readily explained. Thought—laying aside the question of antecedent conditions and influences—begins the act, and determines the desire to touch the object. This thought next becomes transformed into nerve-force—how, why, when, where, are details all-important in their profundity, but immaterial to the plain issue before us. This nerve-force passes, under the direction of the brain, along definite nerve-tracts, leading, say, to the forefinger of the right hand. On the way it stimulates the appropriate muscles. Thus the finger is brought in contact with that part of the outer world represented by the table, and a "sensation" (of touch) is the result of the contact in question. Here ends the act, we may be disposed to

say; but our previous knowledge of "reflex action" and its nature forbids the supposition. "How do you know you touched the table?" is the pertinent query of physiology. The reply is, "Because I felt the contact betwixt my nerves and the object in question." But, retorts the physiologist, "feeling is a brain act; it is an act wherein consciousness or knowledge participates. The seat of knowledge is not the tip of the finger, but the brain. And you must therefore reasonably assume that to the brain the sensation formed and produced in the forefinger is transmitted." Thus we find logical justification for the doctrine of "reflex action" in a common-sense study of the results of touch. The motor impulse sent out from the brain, and, putting the arm and hand in motion, is returned to the brain. It is "reflected" back as a sensory impulse to the sensorium, and kindles therein the knowledge we desire even while we are yet in mere expectancy.

But is this induction founded upon anything more than a consistent theory of brain control and bodily action? In 1811 Sir Charles Bell published his first essay on the nerves which originate from the spinal cord (hence called "spinal nerves") and which supply the body generally with nervous power. The spinal cord itself being a direct continuation downward of the brain, it follows that impulses from the brain pass at first along the main line of the spinal marrow—lodged securely within the bony canal formed by the spine—and thereafter pass along the nerves or branch lines to various stations and termini in the body. To Sir Charles Bell belongs the great and lasting merit of the discovery of the difference in function between the two roots by which each spinal nerve arises from the spinal cord. Each nerve passing outward to the body, thus consists in reality of two sets of nerve-fibres, indistinguishable by microscopic investigation, similar in appearance, but widely different in use and function. Once for all settling, by vivisection on rabbits, the meaning of the double-rooted origin of the nerves, Bell laid the foundation of all subsequent knowledge of nerves and their functions to which in these latter days we have attained. "On laying bare the roots of the spinal nerves,"

says Bell, "I found I could cut across the posterior fasciculus (or hinder root) of nerves, which took its origin from the posterior portion of the spinal marrow, without convulsing the muscles of the back; but that, on touching the anterior fasciculus (or front root) with the point of the knife, the muscles of the back were immediately convulsed." Thus was foreshadowed the great truth that those fibres of a nerve which arise from the hinder part of the spinal cord endow us with sensation, while the front roots give us power of motion. Turn now to the phenomena of touch, and let us endeavor to see how Bell's observation supplies the demonstration of the reflex or duplex theory of nervous acts. When the impression which resulted in your touching the table flashed down the spinal cord from your brain, it was a *motor* impulse. As such, its definite track lay along the anterior part of the spinal cord. It left the cord by the front roots of the nerve-trunk passing to the arm; and travelled along these anterior fibres which unite with the fibres of the hinder root to form apparently a uniform and single-fibred nerve. Reaching the limb, the motor impression arrived at its terminus, and discharged its duty by bringing the muscular arrangements of arm and hand into co-ordination, and thus bringing finger and table into contact. A "sensation" was thus brought into existence, but this latter impression—probably consisting of the transformed "motor" impulse which the instant before had travelled down the limb—passed rapidly backward to the brain as a *sensory* impression. Along the second set of fibres in the nerves of the limb it was duly conveyed. Arriving at the grand junction where the branch nerve from the arm joined the main line of the spinal cord, the impression passed along the hinder root of the nerve into the cord, and ascended to the brain by the hinder part of the great nerve-tract. In the brain-centre the "sensation" gave rise to consciousness and knowledge; and thus "reflex action" becomes demonstrated as a veritable entity and as the method whereby the complex machinery of body is brought into harmonious relation with the still more intricate mechanism of brain and mind.

Next in order, and by way of close to these preliminary studies in sensation, we should note that it is perfectly immaterial, in so far as the universality of reflex action as the basis of nervous acts is concerned, whether the original or primary impulse begins in the brain as the result of thought, or arises directly from the outer world itself; that is, it matters not whether the first impulse or sensation be "motor" or "sensory" in its nature—the same sequence essentially follows the initiation of any nervous action. The "mouth waters" at the sight of a dainty—proportionately, in the experience of most of us, as the chances of obtaining the desired morsel grow few and far between. Here a sensory impulse has passed to the brain through a nerve (the optic) which happens to be of purely sensory kind. In the brain the sensation, or sensory impulse, has been transformed into an afferent impulse—termed "secretory" in this instance, because it is reflected to the salivary glands of the mouth with the familiar result just detailed of causing them to secrete their characteristic fluid. In this case the "sensory" impulse therefore begins the reflex act; while in the case of touching the table it is a "motor" impulse which first leaves the brain and which is soon converted into a sensory impression ending in consciousness or knowledge. Equally important is the question how does the brain regulate the direction and transmission of the messages innumerable which hour by hour flit in and out of its portals? To such a query no answer is possible. Why or how we are able to move this finger or that, how we can lift this limb or the other, is a mystery of mysteries in modern physiology, dwelling as yet in the farthest Arcanum of the science. Lord Dundreary's question, "why a dog wags his tail?" if placed in contrast to his lordship's companion and equally grave query, "why does the tail not waggle the dog?" in reality involves a physiological enigma of which not even the shadow of a reply is yet visible. All that may be said on this head is that the brain must possess among its other attributes the pointsman-like power of directing nerve-impulses into whatever channels the will and mind may prompt. Thus the phys-

iological mystery of the will is as deep and insoluble, at present, as the metaphysical or theological aspects of the question; and thus appears before us a puzzle exceeding that of the Sphinx in its gravity—in plain language, we are unable to tell the reason why we are able to do as we like.

Summing up the few details we have gleaned in our elementary but highly essential study of the broad mechanism of nerves and brain, we may thus learn to distinguish between sensory and motor impressions and between the nerve-fibres along which each is conveyed. We note the power of the brain to reflect, rearrange, and transmit such impulses as reach its substance. We have seen that reflex action in reality forms the basis of our own life and habits, and by a further extension of thought we may note the part it plays in the life of all other beings. When a snail's tentacle is touched, that modest gasteropod withdraws itself from public observation, and retires at once into the quietude of private life. Reflex action, which has transmitted the sensation of touch to the nearest nerve-centre and thence to the muscles of the body, is clearly responsible for the behavior of the mollusc. Even a sea-anemone captures the crab that has stumbled against its tentacles by a like or allied exercise of nerve-acts; and the sensitive plant, and Venus's Flytrap, exhibit the essential features of nerve action in that information received is transmitted elsewhere through the organism, and reacts upon the life and existence of the plant.

For the due performance of reflex action three things are required. First in point of importance comes a nerve-centre; next in importance we place a sensory, and then a motor nerve-fibre, leading respectively to and from the centre. Concerning the nerve-centre we have hitherto spoken as if the brain were the sole representative of the chief office of the telegraphic system of the frame. Be it known, however, that while the brain is such a centre, or rather collection of centres and chief departments, there exist in the body numerous other foci, so to speak, whence impressions may be reflected and rearranged. Next in importance to the brain, we find the spinal cord to act as

a nerve-centre; and it is perhaps the only focus of nerve power, in addition to the brain, of which special mention need be made at present. One observes how the cord may serve as a centre in those too frequent cases of shock to the spine seen after railway accidents and similar exigencies of life. The patient with a severely injured cord is practically dead to sensation below the seat of injury, is powerless to move his legs, and yet will have his limbs thrown into violent convulsions when the soles of his feet are tickled. Over this latter action he has no control, just as he has no knowledge of the irritating cause beyond what his eyes reveal. Yet the explanation is clear. The sensory impulse given to the soles of the feet passed up the spinal cord to the nearest centre in the cord below the seat of injury, and is therefrom reflected to the muscles of the legs, producing the contortions in question. And more wonderful still is the case of that physiologically useful animal the frog, which, lacking its head, behaves itself as does a whole and sound amphibian; wipes off with one foot a drop of vinegar which has been placed on the other; manœuvres its legs when in a difficulty regarding the removal of the vinegar; keeps its balance on your shifting hand; preserves its equilibrium with the agility of an acrobat; and otherwise comports itself in a fashion which strikes awe to the uninitiated mind, but which demonstrates clearly enough the functions of the spinal cord as a nerve-centre to the physiological understanding.

From the study of the mechanism of sensations in general we may profitably turn to that of sensations in particular, wherein we shall find our elementary knowledge not merely an aid, but an absolute essential, toward a clear appreciation of the unusual and strange as well as of the familiar in human existence. The thoughts and concepts we entertain of the world around us may be regarded as the impressions, more or less thoroughly fixed, of sensations which have been conveyed to us by many and varied channels from that outer universe. How the impressions became fixed, or how we are enabled to reproduce them almost at will from the memory-chambers of the brain, are subjects which

may perchance be briefly glanced at later on. Suffice it to remark that knowledge largely, if not completely, consists in a physiological sense of "registered impressions," which have become, in some mysterious fashion, part and parcel of the cerebral substance, and which have been stamped more or less indelibly on the organ of mind. "The coinage of the brain," in very truth, derives its rough form and shape from the outer universe; it is the brain itself which thereafter stamps and issues the refined products as the thoughts of men. These thoughts thus arise wholly or in greater part from impressions, which, being derived directly or indirectly from the objects and material world around us, we may term *objective* sensations. They consist of the mental photographs of the outer world, of ourselves, and of our own relations to the world, which have been projected inward, so to speak, and there fixed, to be printed off, as occasion requires, for future use. The effort to recall reminiscences of past life and the ineffective search after memories may be readily enough likened—to pursue the same simile—to the attempts of the mental photographer to find amidst his many negatives the particular one required by the exigency of the moment. Now and then we give up the quest in despair; but just as frequently, at a time when the necessity for the remembrance of the event has passed by, there dawns upon us the missing recollection—the reproduction, by some sudden and inexplicable trait of mind-photography, of the mental positive, printed off from its stored-up and long-hidden fac-simile. I should maintain, indeed, as a plausible enough theory of the memory-faculty and its action, that no mental concept is ever lost entirely. Crowded out of mind by the thoughts of later years, impressions of youth may nevertheless be suddenly resuscitated by a chance word or a passing glance. And often unconsciously to ourselves, and in ways defying logical conception, we may thus build veritable "haunted houses," wherein the phantoms that rise and walk and converse are not of flesh and blood, but represent the figures, ways, and even speech of those whose life is buried in the past, and whose time was that of the long ago.

That, however, this memory-power of projecting from within outward, upon our intelligence, impressions, and sensations—either of real nature, or blurred and indistinct from causes beyond our ken—possesses a further significance than merely that attaching to a feasible speculation in physiology may readily enough be made plain. We sit down in some quiet nook on a still day, when hardly a sound may be heard, and when the voices of the outer world appear to be well-nigh hushed to silence, and, favored by outward conditions, we fall into a reverie. Abstracted from that outer world, image after image is projected from within outward upon our intelligence, which occasionally may actually fancy it sees vividly the objects it displays, or that it hears the sounds which old memories so clearly bring before it. A tune hummed softly awakens a thousand memories; the singer of olden days comes before us in all the reality of existence; the surroundings are reproduced with faithful exactitude; the most trifling detail comes boldly into the foreground of thought; a ribbon, a bracelet, the pattern of a carpet, the hue of a dress—these and a thousand other details are pictured out with truest fidelity; and the story is acted before our eyes so faithfully that it is with a start of wonderment we suddenly come back to the workaday world, to find "it was but a waking dream." Nor can we refuse to consider the influence of repetition and habit as a predominating cause of such abstraction and reveries. Who does not know the "dreamer" of everyday life, or it may be the poet or poetaster, wrapped in a mantle of thought which defies the penetration of mundane things, and within which he sees and hears a universe of his own? A near gradation, however, brings us within range of the "hallucination" and "illusion," where the creatures and coinages of the brain are projected with more marked effect and in bolder relief than before. Now, it is Satan tempting a Luther—a very devil in the flesh, with whom the religionist converses and argues, whom he defies loudly and persistently, and at whose head the irate reformer throws his ink-horn—a proceeding typical, indeed, of the extinction of many demons by the sweetness and

light of pencil and pen. Then it may be a St. Anthony struggling with an evil spirit of sensuality, or with actual demons who chastise him cruelly. Or it is Joan of Arc who is admonished by "Our Lady of Bellemont" to succor her country, and to take to arms for its defence; or it is the Hindoo, prostrate in pious ecstasy before the shrine of Brahmah, his visions, realities, and his fancied converse with the Almighty One transformed thus into a dread reality.

Such were the hallucinations of the age of faith. But they have not ceased in our own day. The religionist before whom the saintly image moves, to whom it speaks, is a reality of the age we live in, no less than is the insane being we seclude in our asylum. In truth, the study of the former is as much a matter of interest as that of the insane; because, under certain phases of mind, the illusion or hallucination of the one may become the mental disease of the other. Thus it is plain that, given abstraction of thought and imaginative play, and we may evolve from our inner consciousness that poetic fervor which

bodies forth

The forms of things unknown—

or we may revel, by a further development of the same faculty, in the wildest dreams which ever peopled the fancies of an excited visionary, or entranced the tottering intellect of the really insane.

It is, however, necessary that we should distinguish between an "illusion" and an "hallucination," since, although both are stages and gradations in the same series of mental actions, the moral and actual significance of the one may be widely different from that of the other. Under the general name of "hallucination" some authorities include every mental phase or act which is founded upon abnormal brain-action, and which tends to land its possessor and subject on the shores and amid the quicksands of the unreal. Dr. Tanner, in his careful general summary of insanity and its conditions, distinguishes thus between an "hallucination" and a "delusion": "Almost every insane patient labors under hallucinations of one or more of the senses—he sees or converses with imaginary beings. When

he is satisfied by the evidence of his other senses that what he sees and hears is only an *illusion*, he is said to labor under a *hallucination*; whereas, when he believes in his false perceptions, the hallucination becomes a delusion." The objection to Dr. Tanner's definition is, that he starts apparently with the assumption that all persons who suffer from illusions and hallucinations are necessarily insane. The difference, however, between the two latter conditions of mind is clearly and distinctly inferred in the definition just recorded. An "illusion" may best be defined as a disturbed state of the mental faculties wherein the subject, sooner or later coming to test his thoughts and impressions "by the evidences of his other senses," determines that these impressions are unreal. The "hallucination," on the contrary, is not so corrected, and the belief in the appearances seen or heard being sustained, the hallucination deepens and merges into the "delusion." An "illusion" as above defined, therefore, does not include or imply insanity. The very fact that the powers of reason are brought into play to correct the phantasies of the mind places the illusion beyond the sphere of the *maison de santé*. Hence Dr. Tanner may be held to correct the impression which his own words are calculated to convey when he says, "Illusions are frequently observed in a state of mental health, being thus corrected by the reason." But over definitions, save for the purpose of defining the use of the terms in question, it is needless to delay. Suffice it to remark that the two may gradually be merged together, just as the "hallucination" in its defined place may be said to link the "illusion" of the sane with the mad thoughts, delusions, and visions of the really insane. With the explanation of the latter we have nothing at present to do. The person who wrote to Dr. Conolly, demanding "A Holy Bible with engravings, etc., a Concordance, a Martyrology with plates, some other religious books, a late Geographical Grammar, a Modern Gazetteer; newspapers, magazines, almanacks, etc., of any kind or date; musical instruments and music; large plans, guides, maps, directories," and many other works, ending his epis-

tle with a demand for "wines, fruit, lozenges, tobacco, snuff, oysters, money—everything fitting to Almighty God," and who concluded his letter with the remark, "Answer this in three days, or you go to hell. P.S.—A portable desk and stationery, and a dressing-case"—such a correspondent—a monomaniac—no doubt suffered from hallucinations, but of a type in which they had become the delusions of a hopeless case of insanity. On the other hand, the sane man who sees and hears things he knows to be nonentities, and to represent merely the coinages of his brain, despite their vividness and apparent reality, is a subject of physiological and not of medical study; and the brief chronicle of such a history enables us also to explain scientifically the visions of the ghost-seer, and the beatific spectacles which greet the exalted senses of the religious devotee.

Through our study of sensation and its *rationale* we saw that mental conceptions of outside objects, or of external sounds and other material phenomena, were carried inward to the brain and there stored up for future use. We have likewise seen that in a day-dream this formation of mental images—or of *objective sensations*, as we termed them—appears to be superseded by another class of sensations which may be appropriately named *subjective*, since they are produced by internal causes, by inward phases of mental action, and are thus opposed to those sensations which are derived from the outer world. Just as in ordinary nervous action the brain receiving, as we have seen, an impression from the outer world, transfers that impulse elsewhere, so we may conceive that sensations and ideas which pass to the brain as a terminus may be reflected and returned along the pathway by which they entered the kingdom of mind, and thus give rise to impressions of the "subjective" class. Or, to quote a happy remark, "Consciousness has a foreground as well as a background." On the clear appreciation of this simple fact hangs the explanation of a very grave and complex theme. For the illusions of the visionary, and the waking dreams of the seer, are scientifically explicable on the supposition of their "subjective" character. On the belief

that they represent images reflected outwardly from the brain upon the organs of sense, we may well understand how things not seen normally become realities to those who see them from within.

Every day may be said to bring to the healthy mind practical instances of the occurrence of subjective sensations, such as in more typical development constitute the "illusions" of the curious. To select an example within the practical reach of all who may be disposed to try the experiment, suppose we allow the head to depend for some time as in the stooping posture, we hear noises in the ears, sounds of "singing" or "ringing," as we popularly term them; flashes of light before the eyes—also beheld in cases of direct irritation of the organ of sight—and we may also experience a variety of other sensations which are truly "subjective," in that they are produced by no outward noises or sights, but by an internal cause, most probably temporary congestion of the nerve-centres. That there should exist a perfectly natural tendency to speak of the phenomena just mentioned as "heard" and "seen" respectively is a matter exciting no comment. We continually refer to the outward and usual sources of sensations, the impressions which may actually be produced from within. The effect of this perfectly natural method of discerning the origin of sensations becomes ludicrous in practice when, through surgical circumstances over which the patient has no control, a change of locality befalls the nerves in question. A subjective sensation, for instance, refers pain at the extremity of a stump to the portion of the limb which has been removed. A patient who possesses no leg may thus feel pain in his toes. More curious still are the results of the Taliacotian operation for the restoration of the nose. In such a procedure, a flap of skin is detached from the forehead and folded down so as to form the new olfactory organ. So long as the flap remains connected with the forehead, so long will the patient refer his sensations to the forehead when the new nose is touched. That "things are not what they seem" may thus be illustrated physiologically in a very perfect fashion. Subjective sensation here refers the impression to

the original seat of the skin—namely, the forehead—although in time the nose-flap adjusts its sensibility to its new position. So, also, in the well-known experiment of crossing the fore and middle fingers and feeling the tip of the nose with the crossed digits, the organ of smell appears double. Here the surfaces of touch being altered and transposed, the double sensation or illusion arises from the mind referring the impression received by each finger to the natural and separate position of the digits. Still more remarkable are certain subjective sensations produced by a potent belief in the existence of the conditions which give rise to actual (or objective) sensations of like kind. The late Professor Bennett, of Edinburgh, relates a case in which a procurator fiscal, or public prosecutor, in Scotland attended the exhumation of a body in a case of supposed murder, and had to withdraw from the scene on account, as he alleged, of the overpowering odor attending the procedure, and emitted, as he believed, by the coffin. On the latter being examined, it was found to be empty! Another case illustrates, in an equally interesting fashion, the ideational and internal origin of sensations through an intense belief in the real nature of the external conditions which ordinarily produce them. An Edinburgh butcher, engaged in placing a heavy joint of meat on a hook situated above his head, slipped so that the hook appeared to penetrate his arm, and to suspend him thereby. Carried into a druggist's shop close at hand, he was pale, well-nigh pulseless, and suffering, as he said, acute agony, which was intensified on the arm being moved. When, however, the arm was examined, not a trace of injury was to be observed. The hook had merely penetrated the sleeve of his coat; yet his subjective sensations referring the injury to his arm were so real that the pallor and shock were as typically represented as if he had really been transfixed.

A still more remarkable instance of the paramount influence of subjective sensation in determining effects which would result from real or objective impressions is witnessed in the death of the surgical patient from fright as he lay on the operating-table, when Mr. Liston

had merely happened to trace the line of incision with his finger. And the imaginative person who in the early days of plate-glass windows caught a severe cold from sitting, as he thought, at an open window—his eye being deceived by the want of divisions in the glass—likewise illustrated the power of subjective impressions.

From the normal creations of the brain in healthy existence we pass by a gradual transition to those cases of subjective sensations which appear as the result of some abnormal action of the brain, and which therefore bring us to the borderland or neutral territory between the domain of the sane and that of the insane. The sense which appears to be most frequently subject to illusions or subjective sensations is that of hearing. That actual injury will produce specific derangement of this and other senses is a perfectly well-known fact of physiology. A person, after a fall from his horse in which he had sustained some brain-injury, was conscious until his death—which occurred some years thereafter—of a bad odor. In another case of similar nature, one of the membranes of the brain was found diseased after death. Dr. Maudsley tells us in his "Pathology of Mind" of an old gentleman "who, perfectly intelligent in other respects, believed that offensive odors emanated from his body to such a degree as to cause great distress to all who were brought near him in his business, which," adds the author, "he nevertheless conducted with skill and judgment." This person declared that his next-door neighbors were greatly annoyed, and that even cab-horses suffered from his presence. He slept so many hours in one room, changing his bedroom during the night to avoid the concentration of the poisonous odor; yet during this period his business partner had not observed any one irrational feature in his conduct. Ultimately he recovered from a somewhat serious illness, with the result of being at the same time cured of his illusion.

The well-known historical case of Nicolai, the Academician and bookseller of Berlin, read by himself before the Royal Society of that city in 1799, presents us with a most typical instance of the apparent reality of subjective sen-

sations arising from some alienation of the sense of sight. After a period of mental disquietude consequent upon a quarrel, Nicolai began to see various figures which he was conscious were but illusory in nature. There appeared to him the figure of a deceased person, which stood about ten yards off, and remained for about eight minutes. The apparition was unseen by his wife, to whom Nicolai appealed, and in about two hours after the first phantom had appeared it was succeeded by several others. Becoming accustomed to the incident, and recovering from the natural surprise at their appearance, Nicolai set himself to examine these new and unwonted incidents of his life, but failed to associate it with any known cause or condition. When he passed into an adjoining room, the first figure which had appeared followed him. After a day or so had passed this first figure was succeeded by others, among whom friends and strangers were commingled. His intimate friends and associates but rarely appeared in the phantom crowd. His sensations may best be understood from his own words—"After I had recovered from the first impression of terror I never felt myself particularly agitated by these apparitions, as I considered them to be what they really were—the extraordinary consequences of indisposition; on the contrary, I endeavored as much as possible to preserve my composure of mind, that I might remain distinctly conscious of what passed within me." There was no connection betwixt the phantoms and his thoughts; nor, as he tells us, could he produce at will spectral representatives of his friends. "I tried," says Nicolai, "to reproduce at will the persons of my acquaintance by an intense objectivity of their image; but although I saw distinctly in my mind two or three of them, I could not succeed in causing the interior image to become exterior." Neither solitude nor the presence of company affected the distinctness of the images. By day and by night they were equally discernible to Nicolai, and at home and abroad they appeared to his mental gaze, while the act of closing the eyes had no constant effect in causing their disappearance. Although resembling real figures, he had no difficulty in

distinguishing them from living persons ; and although mixing with one another, the phantoms did not appear to be of a social or communicative disposition.

In about four weeks after their first appearance, says Nicolai, "the number of these apparitions increased ; I began to hear them speak ; sometimes they spoke to each other, generally to me. Their discourse was agreeable and short. Occasionally I took them for sensible and tender friends of both sexes, who strove to soften my grief, their consolatory speeches being in general addressed to me when I was alone. These consolatory addresses consisted sometimes of abrupt phrases, and at other times they were regularly executed. Although my mind and body were at this period in a sound state, and the spectres had become so familiar to me that they did not cause me the least annoyance, I sought by suitable means, to rid myself of them.* An application of leeches was made to my head one morning (April 20, 1791) at eleven o'clock. The surgeon was alone with me," continues Nicolai ; "during the operation the room was filled with human figures of every kind ; this hallucination continued without interruption till half past four, when I perceived that the motion of the phantoms became slower. Soon afterward they began to grow pale, and at seven o'clock they had all a whitish appearance ; their movements were slow, but their forms still distinct. By degrees they became vaporous, and appeared to mix with the air, although some of their parts remained very visible for some time. About eight o'clock they were all gone, since which time I have seen nothing of them, although I have thought more than once they were about to appear."

This interesting recital affords us not only a very typical case of spectral illusions, but suggests from certain of its details the influence of continuance and habit in intensifying the appearances

* Nicolai, it may be mentioned, had neglected to undergo the periodical blood-letting in which our great grandfathers and the succeeding generation indulged in spring-time, on some curious and mistaken popular notion (probably founded upon the periodic revival of nature and the returning growth of plants) that local depletion was necessary for the preservation of health.

presented by the phantom array. At first the spectres preserved the usual ghostly silence ; and in about a month after their first appearance Nicolai began to hear them speak, while they increased in number as time advanced. These two latter phases of Nicolai's case are highly instructive. They tend to prove, firstly, that subjective sensations, like normal or objective impressions, increase in number and distinctness with use and habit ; and they show, in the second place, that a continuance of the sensations developed their complexity and intensified the reality of the creatures of Nicolai's brain. The apparent addition of speech on the part of the phantoms, and the illusion of words, clearly showed that the affection had become one of subjective hearing, as well as of subjective sight. And thus illusions exhibit a tendency to develop or to disappear like aberrations of bodily functions ; while the course and nature of these "troubles of the brain," as a rule, are in perfect harmony with the spirit of the age, with the special proclivities of the subject, and with the times in which the sufferer lives—two facts to which may be added a third, namely, the palpable influence of habits of body or mind—such as religious fervor and belief—upon the production and nature of the illusions in question.

The case of a Mrs. A., related by Sir David Brewster, is as typical as that of Nicolai in its description of the development of these "coinages of the brain." On December 21, 1830, this lady was startled to hear her husband's voice calling to her. After opening every door in the neighborhood of the hall in which she was standing, she concluded that Mr. A. must have departed from the house, but was more than surprised to find, on Mr. A.'s return home, that he had not been near the house on the occasion referred to. Some days thereafter, on entering the drawing-room which she had left a few minutes before, she saw Mr. A. standing with his back to the fire. On asking him why he had returned so soon from his walk, the figure looked fixedly at her, but did not speak. Thereupon, thinking her husband involved in thought, she sat down in an arm-chair close by, with the remark, "Why don't you speak ?" There-

upon the figure passed toward a window at the farther end of the room, still gazing upon her, and in its progress she remarked that she heard no noise of footsteps or any other of the usual sounds made in progression. She was now convinced that she was gazing upon a spectral illusion. The figure soon disappeared, but while it remained before her it appeared to conceal the objects before which it stood. Similar illusions were noted by Mrs. A. in the case of the cat which she imagined she saw in the drawing-room, but which was at that particular moment in the housekeeper's apartment. Her husband was witness of the latter incident. Among the other figures which appeared to this lady was that of a female relative who was at the period in question in Scotland in perfect health, but whose image appeared enveloped in grave-clothes, and in the ghastly appearance of death. And on another occasion, when alone in her bedroom, and in the act of repeating a passage from the *Edinburgh Review* which had captivated her notice and memory, she beheld seated in an arm-chair a deceased sister-in-law. The figure was clad in a gown of a peculiar pattern which had been vividly described to her by a friend who had seen the deceased lady wear it. Here a dominant idea—that of the description of the dress—had probably lent its aid to increase the realism of, or even to produce, this particular phantom. In the case of another illusion, the figure of a second deceased friend sat down in a chair opposite Mrs. A., on an occasion when several other persons were in the room. Mrs. A. was afraid lest the fact of her staring persistently at what to her visitors would appear empty space should be noticed; and "under the influence of this fear," says Sir David Brewster, and recollecting that Sir Walter Scott in his "Demonology" had mentioned such a procedure, "she summoned up the requisite resolution to enable her to cross the space before the fireplace, and seat herself in the same chair with the figure. The apparition remained perfectly distinct till she sat down, as it were, in its lap, when it vanished."

The case of Mrs. A. presents some noteworthy resemblances to that of Nicolai. She was a person of imagina-

tive disposition, and she was in feeble health at the period when the illusions appeared. Her strong common-sense, aided, as Sir David Brewster tells us, by a perusal of Dr. Hibbert's famous work on the "Philosophy of Apparitions"—wherein that learned author declares that "apparitions are nothing more than morbid symptoms which are indicative of intense excitement of the renovated feelings of the mind"—served to free Mrs. A. from ideas of supernatural visitation, by which, it is not too much to say, nine persons out of ten among ourselves would be apt to explain the unwonted appearances. The physiological explanation of cases of spectral illusions is, however, simple in the extreme when the possibilities of morbid and deranged sensation are seen to relate themselves in a very exact and plain fashion to the natural method of receiving impressions. Those parts of Mrs. A.'s brain, eye, and ear, and of Nicolai's brain and organs of sense, which, under normal conditions, would have been concerned in the reception of actual sights and sounds, were made active and operated under some internal cause to produce the unwonted phenomena. As we have already noted, it is highly probable that in so acting the sensory organs and brain are but reproducing from the background, and projecting into the foreground of consciousness, images of which the conscious memory retains no impression, but which have been received at some past epoch of the individual history, and which, under unwonted stimulation, are evolved so as to appear part and parcel of our own personality.

That this latter conclusion—namely, that of the act in question being essentially one of memory—is perfectly justifiable, is rendered strikingly apparent by the case of Mrs. A., all of whose apparitions were those of known persons, and thus were simple reproductions of mental images, in one of which—that of the deceased sister-in-law—a vivid description of a particular pattern of dress served to add to the apparent reality of the illusion. In Nicolai's case, the strangers who appeared to him were, in all probability, the images of persons whom he had either seen in bygone days, and of whom he failed to retain

any recollection, or were those of people with whose figures or appearance he was familiar from reading. In our own experience, we can readily recall to mind instances of the sudden recollection of faces, figures, scenery, etc., the details of which may have long been forgotten, but which may be revived by the application of an appropriate mental stimulus. Such a thought serves to suggest the important part which what may be termed "unconscious memory" plays in the regulation of mind-affairs and in human existence at large.

A scientific theory of ghosts is thus not merely possible, but in the highest degree probable, as resting on a scientific basis. But there are other matters to which a study like the present intimately relates itself. The vitiation of testimony by the aberration of the senses—or even the variations between the evidence of one witness and another—become explicable on the basis of varying sensations thus laid down. Nor does the domain of religion escape physiological attention. The mystic experiences of votaries and the heroism of martyrs may alike be capable of explanation under the belief of that exaltation of sense, and of the alteration of sensations and feelings, which appear to affect every period of human history, and which indeed often embody many of the peculiarities of each individual epoch. No less intimately, however, does the present subject concern that idealization of material things in which the highest genius of poet, painter, sculptor, and musician may be said to reside. The creations of the brain are not wholly on the side of phantasy; and from the subjective side of human nature, the distilled and purified feelings of mankind may be evolved in thoughts that live for aye. But the gradation betwixt the æsthetics of sensation and the abnormal play of impressions is still clearly marked and plainly apparent. And there are few higher missions or triumphs than those of "star-eyed science,"

which, taking as her theme the creatures and coinages of the brain, may show us the stern realities and facts which beset and often underlie the veriest dreams and phantoms of our life.

[Since the above article was written the Rev. Dr. Jessopp has related in the *Athenæum* of January 10, 1880, a curious and most interesting case of ghost-seeing in his own person. Sitting, on the night of October 10, 1879, in a room in Lord Orford's mansion, Dr. Jessopp beheld "a large white hand" within a foot of his elbow; and then became conscious of the presence of the spectre of "a somewhat large man with his back to the fire, bending slightly over the table, and apparently examining," says Dr. Jessopp, "the pile of books that I had been at work upon." The figure was dressed in "a kind of ecclesiastical habit of thick corded silk or some such material, close up to the throat, and a narrow rim or edging, of about an inch broad, of satin or velvet serving as a stand-up collar, and fitting close to the chin." Dr. Jessopp, eager to sketch his spectral visitant, made a movement toward a pile of books, but the figure vanished. After a short interval the figure reappeared, Dr. Jessopp's anxiety to address it resulting in a nervous fear of his own voice. Resuming and finishing his task of transcribing some notes, the reverend narrator shut his book and threw it on the table; "it made a slight noise as it fell—the figure vanished."

This clear and interesting account adds but another to the list of cases of which Nicolai's and that of Mrs. A. are typical examples. Dr. Jessopp's experiences present all the features usually seen in such cases, and his rational treatment of the phenomena may fitly be placed beside the common-sense behavior of Mrs. A.—both refusing to translate the natural in terms of the supernatural, and both tacitly referring the illusion to the "mind's eye." One point alone, in Dr. Jessopp's case, demands special note. The figure was that of a past epoch; and it was such as a man of antiquarian tastes and studies might expect to be included among the special "coinages" of his brain. This fact alone militates strongly in favor of the remarks already made in the preceding article regarding the probability that the basis of our illusions resides in the memory of things or persons seen, heard, read about, or even imagined. That Dr. Jessopp's "ghostly visitant" may most likely have been the reproduction of some antiquarian study—utterly forgotten, but unconsciously reproduced by memory—is by no means a far-fetched theory, taking all the facts of the case into consideration.]

Belgravia Magazine.

THE OLD PACIFIC CAPITAL: THE WOODS AND THE PACIFIC.

BY ROBERT LOUIS STEVENSON.

THE Bay of Monterey has been compared by no less a person than General Sherman to a bent fishing-hook; and the comparison, if less important than the march through Georgia, still shows the eye of a soldier for topography. Santa Cruz sits exposed at the shank; the mouth of the Salinas River is at the middle of the bend; and Monterey itself is cosily ensconced beside the barb. Thus the ancient capital of California faces across the bay, while the Pacific Ocean, though hidden by low hills and forest, bombards her left flank and rear with never-dying surf. In front of the town the long line of sea-beach trends north and northwest, and then westward to inclose the bay. The waves which lap so quietly about the jetties of Monterey grow louder and larger in the distance; you can see the breakers leaping high and white by day; at night the outline of the shore is traced in transparent silver by the moonlight and the flying foam; and from all round, even in quiet weather, the low, distant, thrilling roar of the Pacific hangs over the coast and the adjacent country like smoke above a battle.

These long beaches are enticing to the idle man. It would be hard to find a walk more solitary and at the same time more exciting to the mind. Crowds of ducks and seagulls hover over the sea. Sandpipers trot in and out by troops after the retiring waves, trilling together in a chorus of infinitesimal song. Strange sea-tangles, new to the European eye, the bones of whales, or sometimes a whole whale's carcass, white with carrion gulls and poisoning the wind, lie scattered here and there along the sands. The waves come in slowly, vast and green, curve their translucent necks, and burst with a surprising uproar, that runs, waxing and waning, up and down the long key-board of the beach. The foam of these great ruins mounts in an instant to the ridge of the sand glacia, swiftly fleets back again, and is met and buried by the next breaker. The interest is perpetually fresh. On no other coast that I know

shall you enjoy, in calm, sunny weather, such a spectacle of ocean's greatness, such beauty of changing color, or such degrees of thunder in the sound. The very air is more than usually salt by this Homeric deep.

In shore, a tract of sand-hills borders on the beach. Here and there a lagoon, more or less brackish, attracts the birds and hunters. A rough, spotty undergrowth partially conceals the sand. The crouching, hardy live-oaks flourish singly or in thickets—the kind of wood for murderers to crawl among—and here and there the skirts of the forest extend downward from the hills, with a floor of turf and long aisles of pine trees hung with Spaniard's Beard. Through this quaint desert the railway cars drew near to Monterey from the junction at Salinas City—though that and so many other things are now forever altered—and it was from here that you had your first view of the old township lying in the sands, its white windmills bickering in the chill, perpetual wind, and the first fogs of the evening drawing drearily around it from the sea.

The one common note of all this country is the haunting presence of the ocean. A great faint sound of breakers follows you high up into the inland canyons; the roar of water dwells in the clean, empty rooms of Monterey as in a shell upon the chimney; go where you will, you have but to pause and listen to hear the voice of the Pacific. You pass out of the town to the southwest, and mount the hill among pine woods. Glade, thicket, and grove surround you. You follow winding sandy tracts that lead nowhither. You see a deer; a multitude of quail arises. But the sound of the sea still follows you as you advance, like that of wind among the trees, only harsher and stranger to the ear; and when at length you gain the summit, out breaks on every hand and with freshened vigor that same unending, distant, whispering rumble of the ocean; for now you are on the top of Monterey peninsula, and the noise no longer only mounts to you from be-

hind along the beach toward Santa Cruz, but from your right also, round by Chinatown and Pinos Lighthouse, and from down before you to the mouth of the Carmello River. The whole woodland is begirt with thundering surges. The silence that immediately surrounds you where you stand is not so much broken as it is haunted by this distant, circling rumor. It sets your senses upon edge; you strain your attention; you are clearly and unusually conscious of small sounds near at hand; you walk listening like an Indian hunter; and that voice of the Pacific is a sort of disquieting company to you in your walk.

When once I was in these woods I found it difficult to turn homeward. All woods lure a Rambler onward; but in those of Monterey it was the surf that particularly invited me to prolong my walks. I would push straight for the shore where I thought it to be nearest. Indeed, there was scarce a direction that would not, sooner or later, have brought me forth on the Pacific. The emptiness of the woods gave me a sense of freedom and discovery in these excursions. I never, in all my visits, met but one man. He was a Mexican, very dark of hue, but smiling and fat, and he carried an axe, though his true business at that moment was to seek for straying cattle. I asked him what o'clock it was, but he seemed neither to know nor care; and when he in his turn asked me for news of his cattle, I showed myself equally indifferent. We stood and smiled upon each other for a few seconds, and then turned without a word and took our several ways across the forest.

One day—I shall never forget it—I had taken a trail that was new to me. After a while the woods began to open, the sea to sound nearer hand. I came upon a road, and, to my surprise, a stile. A step or two farther, and, without leaving the woods, I found myself among trim houses. I walked through street after street, parallel and at right angles, paved with sward and dotted with trees, but still undeniable streets, and each with its name posted at the corner, as in a real town. Facing down the main thoroughfare—"Central Avenue," as it was ticketed—I saw an open air temple, with benches and

sounding-board, as though for an orchestra. The houses were all tightly shuttered; there was no smoke, no sound but of the waves, no moving thing. I have never been in any place that seemed so dreamlike. Pompeii is all in a bustle with visitors, and its antiquity and strangeness deceive the imagination; but this town had plainly not been built above a year or two, and perhaps had been deserted over night. Indeed, it was not so much like a deserted town as like a scene upon the stage by daylight and with no one on the boards. The barking of a dog led me at last to the only house still occupied, where a Scotch pastor and his wife pass the winter alone in this empty theatre. The place was "The Pacific Camp Grounds, the Christian Seaside Resort." Thither, in the warm season, crowds come to enjoy a life of teetotalism, religion, and flirtation, which I am willing to think blameless and agreeable. The neighborhood at least is well selected. The Pacific booms in front. Westward is Point Pinos, with the lighthouse in a wilderness of sand, where you will find the lightkeeper playing the piano, making models and bows and arrows, studying dawn and sunrise in amateur oil-painting, and with a dozen other elegant pursuits and interests to surprise his brave, old-country rivals. To the east, and still nearer, you will come upon a space of open down, a hamlet, a haven among rocks, a world of surge and screaming seagulls. Such scenes are very similar in different climates; they appear homely to the eyes of all; to me this was like a dozen spots in Scotland. And yet the boats that ride in the haven are of a strange outlandish design; and if you walk into the hamlet you will behold costumes and faces and hear a tongue that are unfamiliar to the memory. The joss-stick burns, the opium-pipe is smoked, the floors are strewn with slips of colored paper—prayers, you would say, that had somehow missed their destination—and a man, guiding his upright pencil from right to left across the sheet, writes home the news of Monterey to the Celestial Empire.

The woods and the Pacific rule between them the climate of this seaboard region. On the streets of Monterey,

when the air does not smell salt from the one, it will be blowing perfumed from the resinous tree-tops of the other. For days together a hot dry air will overhang the town, close as from an oven, yet healthful and aromatic in the nostrils. The cause is not far to seek, for the woods are afire, and the hot wind is blowing from the hills. These fires are one of the great dangers of California. I have seen from Monterey as many as three at the same time, by day a cloud of smoke, by night a red coal of conflagration in the distance. A little thing will start them, and if the wind be favorable they gallop over miles of country faster than a horse. The inhabitants must turn out and work like demons, for it is not only the pleasant groves that are destroyed; the climate and the soil are equally at stake, and these fires prevent the rains of the next winter, and dry up perennial fountains. California has been a land of promise in its time, like Palestine; but if the woods continue so swiftly to perish, it may become, like Palestine, a land of desolation.

To visit the woods while they are languidly burning is a strange piece of experience. The fire passes through the underbrush at a run. Every here and there a tree flares up instantaneously from root to summit, scattering tufts of flame; and is quenched, it seems, as quickly. But this last is only in semblance. For after this, first squib-like conflagration of the dry moss and twigs, there remains behind a deep-rooted and consuming fire in the very entrails of the tree. The resin of the pitch pine is principally condensed at the base of the bole and in the spreading roots. Thus, after the light, showy, skirmishing flames, which are only as the match to the explosion, have already scampered down the wind into the distance, the true harm is but beginning for this giant of the woods. You may approach the tree from one side, and see it, scorched indeed from top to bottom, but apparently survivor of the peril. Make the circuit, and there, on the other side of the column, is a clear mass of living coal, spreading like an ulcer, while underground, to their most extended fibre, the roots are being eaten out by fire, and the smoke is rising through the fis-

tures to the surface. A little while, and, without a nod of warning, the huge pine-tree snaps off short across the ground and falls prostrate with a crash. Meanwhile the fire continues its silent business; the roots are reduced to a fine ash; and long afterward, if you pass by, you will find the earth pierced with radiating galleries, and preserving the design of all these subterranean spurs, as though it were the mould for a new tree instead of the print of an old one. These pitch pines of Monterey are, with the single exception of the Monterey cypress, the most fantastic of forest trees. No words can give an idea of the contortion of their growth; they might figure without change in a circle of the nether hell as Dante pictured it; and at the rate at which trees grow, and at which forest fires spring up and gallop through the hills of California, we may look forward to a time when there will not be one of them left standing in that land of their nativity. At least they have not so much to fear from the axe, but perish by what may be called a natural, although a violent death; while it is man in his short-sighted greed that robs the country of the nobler red-wood. Yet a little while and perhaps all the hills of seaboard California may be as bald as Tamalpais.

I have an interest of my own in these forest fires, for I came so near to lynching on one occasion that a braver man might have retained a thrill from the experience. I wished to be certain whether it was the moss, that quaint funereal ornament of Californian forests, which blazed up so rapidly when the flame first touched the tree. I suppose I must have been under the influence of Satan; for instead of plucking off a piece for my experiment, what should I do but walk up to a great pine tree in a portion of the wood which had escaped so much as scorching, strike a match, and apply the flame gingerly to one of the tassels. The tree went off simply like a rocket; in three seconds it was a roaring pillar of fire. Close by I could hear the shouts of those who were at work combating the original conflagration. I could see the wagon that had brought them tied to a live oak in a piece of open; I could even catch the flash of an axe as it swung up through

the underwood into the sunlight. Had any one observed the result of my experiment my neck was literally not worth a pinch of snuff; after a few minutes of passionate expostulation I should have been run up to a convenient bough.

To die for faction is a common evil;
But to be hanged for nonsense is the devil.

I have run repeatedly, but never as I ran that day. At night I went out of town, and there was my own particular fire, quite distinct from the other, and burning, as I thought, with even greater spirit.

But it is the Pacific that exercises the most direct and obvious power upon the climate. At sunset, for months together, vast, wet, melancholy fogs arise and come shoreward from the ocean. From the hill-top above Monterey the scene is often noble, although it is always sad. The upper air is still bright with sunlight; a glow still rests upon the Gabelano Peak; but the fogs are in possession of the lower levels; they crawl in scarves among the sand-hills; they float, a little higher, in clouds of a gigantic size and often of a wild configuration; to the south, where they have struck the seaward shoulder of the mountains of Santa Lucia, they double back and spire up skyward like smoke. Where their shadow touches, color dies out of the world. The air grows chill and deadly as they advance. The trade-wind freshens, the trees begin to sigh, and all the windmills in Monterey are whirling and creaking and filling their cisterns with the brackish water of the sands. It takes but a little while till the invasion is complete. The sea, in its lighter order, has submerged the earth. Monterey is curtained in for the night in thick, wet, salt, and frigid clouds, so to remain till day returns; and before the sun's rays they slowly disperse and retreat in broken squadrons to the bosom of the sea. And yet often when the fog is thickest and most chill, a few steps out of the town and up the slope the night will be dry and warm and full of inland perfume.

MEXICANS, AMERICANS, AND INDIANS.

The history of Monterey has yet to be written. Founded by Catholic missionaries, a place of wise beneficence to

Indians, a place of arms, a Mexican capital continually wrested by one faction from another, an American capital when the first House of Representatives held its deliberations, and then falling lower and lower from the capital of the State to the capital of a county, and from that again, by the loss of its charter and town lands, to a mere bankrupt village, its rise and decline is typical of that of all Mexican institutions, and even Mexican families, in California. Nothing is stranger in that strange State than the rapidity with which the soil has changed hands. The Mexicans, you may say, are all poor and landless, like their former capital; and yet both it and they hold themselves apart and preserve their ancient customs and something of their ancient air.

The town, when I was there, was a place of two or three streets, economically paved with sea sand, and two or three lanes, which were watercourses in the rainy season, and were, at all times, rent up by fissures four or five feet deep. There were no street lights. Short sections of wooden sidewalk only added to the dangers of the night, for they were often high above the level of the roadway, and no one could tell where they would be likely to begin or end. The houses were, for the most part, built of unbaked adobe brick, many of them old for so new a country, some of very elegant proportions, with low, spacious, shapely rooms, and walls so thick that the heat of summer never dried them to the heart. At the approach of the rainy season a deathly chill and a graveyard smell began to hang about the lower floors; and diseases of the chest are common and fatal among housekeeping people of either sex.

There was no activity but in and around the saloons, where people sat almost all day long playing cards. The smallest excursion was made on horseback. You would scarcely ever see the main street without a horse or two tied to posts, and making a fine figure with their Mexican housings. It struck me oddly to come across some of the *Corn-hill* illustrations to Mr. Blackmore's "Erema," and see all the characters astride on English saddles. As a matter of fact, an English saddle is a rarity even in San Francisco, and, you may

say, a thing unknown in all the rest of California. In a place so exclusively Mexican as Monterey, you saw not only Mexican saddles but true Vaquero riding—men always at the hand-gallop up hill and down dale, and round the sharpest corner, urging their horses with cries and gesticulations and cruel rotatory spurs, checking them dead with a touch, or wheeling them right-about-face in a square yard. The type of face and character of bearing is surprisingly un-American. The first ranged from something like the pure Spanish to something, in its sad fixity, not unlike the pure Indian, although I do not suppose there was one pure blood of either race in all the country. As for the second, it was a matter of perpetual surprise to find, in that world of absolutely mannerless Americans, a people full of deportment, solemnly courteous, and doing all things with grace and decorum. In dress they ran to color and bright sashes. Not even the most Americanized could always resist the temptation to stick a red rose into his hat-band. Not even the most Americanized would condescend to wear the vile dress hat of civilization. Spanish was the language of the streets. It was difficult to get along without a word or two of that language for an occasion. The only communications in which the population joined were with a view to amusement. A weekly public ball took place with great etiquette, in addition to the numerous fandangoes in private houses. There was a really fair amateur brass band. Night after night serenaders would be going about the street, sometimes in a company and with several instruments and voices together, sometimes severally, each guitar before a different window. It was a strange thing to lie awake in nineteenth century America and hear the guitar accompany, and one of these old, heart-breaking Spanish love songs mount into the night air, perhaps in a deep baritone, perhaps in that high-pitched, pathetic, womanish alto which is so common among Mexican men, and which strikes on the unaccustomed ear as something not entirely human but altogether sad.

The town, then, was essentially and wholly Mexican; and yet almost all the land in the neighborhood was held by

Americans, and it was from the same class, numerically so small, that the principal officials were selected. This Mexican and that Mexican would describe to you his old family estates, not one rood of which remained to him. You would ask him how that came about, and elicit some tangled story back-foremost, from which you gathered that the Americans had been greedy like designing men, and the Mexicans greedy like children, but no other certain fact. Their merits and their faults contributed alike to the ruin of the former landholders. It is true they were improvident, and easily dazzled with the sight of ready money; but they were gentlefolk besides, and that in a way which curiously unfitted them to combat Yankee craft. Suppose they have a paper to sign, they would think it a reflection on the other party to examine the terms with any great minuteness; nay, suppose them to observe some doubtful clause, it is ten to one they would refuse from delicacy to object to it. I know I am speaking within the mark, for I have seen such a case occur, and the Mexican, in spite of the advice of his lawyer, has signed the imperfect paper like a lamb. To have spoken in the matter, he said, above all to have let the other party guess that he had seen a lawyer, would have "been like doubting his word." The scruple sounds oddly to one of ourselves, who has been brought up to understand all business as a competition in fraud, and honesty itself to be a virtue which regards the carrying out but not the creation of agreements. This single unworldly trait will account for much of that revolution of which we are speaking. The Mexicans have the name of being great swindlers, but certainly the accusation cuts both ways. In a contest of this sort, the entire booty would scarcely have passed into the hands of the more scrupulous race.

Physically the Americans have triumphed; but it is not yet entirely seen how far they have themselves been morally conquered. This is, of course, but a part of a part of an extraordinary problem now in the course of being solved in the various States of the American Union. I am reminded of an anecdote. Some years ago, at a great

sale of wine, all the odd lots were purchased by a grocer in a small way in the old town of Edinburgh. The agent had the curiosity to visit him some time after and inquire what possible use he could have for such material. He was shown, by way of answer, a huge vat where all the liquors, from humble Gladstone to imperial Tokay, were fermenting together. "And what," he asked, "do you propose to call this?" "I'm no very sure," replied the grocer, "but I think it's going to turn out port." In the older Eastern States I think we may say that this hotch-potch of races is going to turn out English, or thereabout. But the problem is indefinitely varied in other zones. The elements are differently mingled in the south in what we may call the territorial belt, and in the group of States on the Pacific coast. Above all, in these last we may look to see some monstrous hybrid—whether good or evil, who shall forecast? but certainly original and all its own. In my little restaurant at Monterey we have sat down to table day after day a Frenchman, two Portuguese, an Italian, a Mexican, and a Scotchman; we had for common visitors an American from Illinois, a nearly pure blood Indian woman, and a naturalized Chinese; and from time to time a Switzer and a German came down from country ranches for the night. No wonder that the Pacific coast is a foreign land to visitors from the Eastern States, for each race contributes something of its own. Even the despised Chinese have taught the youth of California, none indeed of their virtues, but the debasing use of opium. And chief among these influences is that of the Mexicans.

The Mexicans, although in the State, are out of it. They still preserve a sort of international independence, and keep their affairs snug and to themselves. Only four or five years ago Vasquez, the bandit, his troop being dispersed and the hunt too hot for him in other parts of California, returned to his native Monterey, and was seen publicly in her streets and saloons, fearing no man. The year that I was there there occurred two reputed murders. As the Montereyans are exceptionally vile speakers of each other and of every one behind his back, it is not possible for me to judge

how much truth there may have been in these reports; but in the one case every one believed, and in the other some suspected, that there had been foul play; and nobody dreamed for an instant of taking the authorities into their counsel. Now this is, of course, characteristic enough of the Mexicans; but it is a noteworthy feature that all the Americans in Monterey acquiesced without a word in this inaction. Even when I spoke to them upon the subject they seemed not to understand my surprise; they had forgotten the traditions of their own race and upbringing, and become, in a word, wholly Mexicanized.

Again, the Mexicans, having no ready money to speak of, rely almost entirely in their business transactions upon each other's worthless paper. Pedro, the penniless pays you with an I O U from the equally penniless Miguel. It is a sort of local currency by courtesy. Credit in these parts has passed into a superstition. I have seen a strong, violent man struggling for months to recover a debt, and getting nothing but an exchange of waste paper. The very storekeepers are averse to asking for cash payments, and are more surprised than pleased when they are offered. They fear there must be something under it, and that you mean to withdraw from them your custom. I have seen the enterprising chemist and stationer begging me with fervor to let my account run on, although I had my purse open in my hand; and partly from the commonness of the case, partly from some remains of that generous old Mexican tradition which made all men welcome to their tables, a person may be notoriously both unwilling and unable to pay and still find credit for the necessities of life in the stores of Monterey. Now this villainous habit of living upon "tick" has grown into Californian nature. I do not only mean that the American and European storekeepers of Monterey are as lax as Mexicans; I mean that American farmers in many parts of the State expect unlimited credit, and profit by it in the meanwhile, without a thought for consequences. Jew storekeepers have already learned the advantage to be gained from this; they lead on the farmer into irretrievable indebtedness, and keep him ever after

as their bond-slave, hopelessly grinding in the mill. So the whirligig of time brings in its revenges, and except that the Jew knows better than to foreclose, you may see Americans bound in the same chains with which they themselves had formerly bound the Mexican. It seems as if certain sorts of follies, like certain sorts of grain, were natural to the soil rather than to the race that holds and tills it for the moment.

In the mean time, however, the Americans rule in Monterey County. The new county seat, Salinas City, in the bald, corn bearing plain under the Gabelano Peak, is a town of a purely American character. The land is held, for the most part, in those enormous tracts which are another legacy of Mexican days, and form the present chief danger and disgrace of California; and the holders are mostly of American or British birth. We have here in England no idea of the troubles and inconveniences which flow from the existence of these large landholders—land thieves, land sharks, or land grabbers, they are more commonly and plainly called. Thus the townlands of Monterey are all in the hands of a single man. How they came there is an obscure, vexatious question, and, rightly or wrongly, the man is hated with a great hatred. His life has been repeatedly in danger. Not very long ago, I was told, the stage was stopped and examined three evenings in succession by disguised horsemen thirsting for his blood. A certain house on the Salinas road, they say, he always passes in his buggy at full speed, for the squatter sent him warning long ago. But a year since he was publicly pointed out for death by no less a man than Mr. Dennis Kearney. Kearney is a man too well known in California, but a word of explanation is required for English readers. Originally an Irish drayman, he rose, by his command of bad language, to almost dictatorial authority in the State; throned it there for six months or so, his mouth full of oaths, gallowses, and confagurations; was first snuffed out last winter by Mr. Coleman, backed by his San Francisco Vigilantes and three Gatling guns; completed his own ruin by throwing in his lot with the grotesque Greenbacker party; and had at last to be rescued by his old enemies, the po-

lice, out of the hands of his rebellious followers. It was while he was at the top of his fortune that Kearney visited Monterey with his battle cry against Chinese labor, the railroad monopolists, and the land thieves; and his one articulate counsel to the Montereyans was to "hang David Jacks." Had the town been American, in my private opinion this would have been done years ago. Land is a subject on which there is no jesting in the West, and I have seen my friend the lawyer drive out of Monterey to adjust a competition of titles with the face of a captain going into battle and his Smith-and-Wesson convenient to his hand.

On the rancho of another of these landholders you may find our old friend, the truck system, in full operation. Men live there, year in year out, to cut timber for a nominal wage, which is all consumed in supplies. The longer they remain in this desirable service the deeper they will fall in debt—a burlesque injustice in a new country, where labor should be precious, and one of those typical instances which explains the prevailing discontent and the success of the demagogue Kearney.

In a comparison between what was and what is in California, the praisers of times past will fix upon the Indians of Carmello. The day of the Jesuit has gone by, the day of the Yankee has succeeded, and there is no one left to care for the converted savage. The mission church is roofless and ruinous; sea-breezes and sea-fogs, and the alternation of the rain and sunshine, daily widening the breaches and casting the crockets from the wall. As an antiquity in this new land, a quaint specimen of missionary architecture, and a memorial of good deeds, it had a triple claim to preservation from all thinking people; but neglect and abuse have been its portion. There is no sign of American interference save where a headboard has been torn from a grave to be a mark for pistol bullets. So it is with the Indians for whom it was erected. Their lands, I was told, are being yearly encroached upon by the neighboring American proprietor, and with that exception no man troubles his head for the Indians of Carmel. Only one day in the year, the day before our Guy Faux, the *padre* drives

over the hill from Monterey; the little sacristy, which is the only covered portion of the church, is filled with seats and decorated for the service; the Indians troop together, their bright dresses contrasting with their dark and melancholy faces; and there, among a crowd of somewhat unsympathetic holiday makers, you may hear God served with perhaps more touching circumstances than in any other temple under heaven. An Indian, stone blind and about eighty years of age, conducts the singing; other Indians compose the choir; yet they have the Gregorian music at their finger ends, and pronounce the Latin so correctly that I could follow the meaning as they sang. The pronunciation was odd and nasal, the singing hurried and staccato. "In sæcula sæcula-ho-horum," they went, with a vigorous aspirate to every additional syllable. I have never seen faces more vividly lit up with joy than the faces of these Indian singers. It was to them not only the worship of God, nor an act by which they recalled and commemorated better days, but was besides an exercise of culture, where all they knew of art and letters was united and expressed. And it made a man's heart sorry for the good fathers of yore, who

had taught them to dig and to reap, to read and to sing, who had given them European mass-books which they still preserve and study in their cottages, and who had now passed away from all authority and influence in that land—to be succeeded by greedy land thieves and sacrilegious pistol-shots. So ugly a thing our Anglo-Saxon Protestantism may appear beside the doings of the Society of Jesus.

But revolution in this world succeeds to revolution. All that I say in this paper is in a paulo-past tense. The Monterey of last year exists no longer. A huge hotel has sprung up in the desert by the railway. Three sets of diners sit down successively to table. Invaluable toilettes figure along the beach and between the live oaks; and Monterey is advertised in the newspapers, and posted in the waiting-rooms at railway stations, as a resort for wealth and fashion. Alas for the little town! it is not strong enough to resist the influence of the flaunting caravanseraï, and the poor, quaint, penniless native gentlemen of Monterey must perish, like a lower race, before the millionnaire vulgarians of the Big Bonanza.—*Fraser's Magazine*.

AN OCTOBER NIGHT.

A VERSION BY WALTER H. POLLOCK OF ALFRED DE MUSSET'S "LA NUIT D'OCTOBRE."

THE POET.

THE grief that weighed me down has disappeared
And left me like a dream—far off and dim
Its memory seems, like night-engendered mists
That with the dewdrops melt before the dawn.

THE MUSE.

Tell me, my Poet, what may be this pain
That for so long has kept thee far from me.
Ready to greet the name, the much-loved name
Of comforter, I come to comfort thee.
Grief's grace is wasted in the secrecy
That thou hast given it. Hadst thou called on me
In thy first days of dark and silent woe,
I had been there to help. I too have wept,
Knowing thine absence, knowing not its cause.
Tell me what grief it is I catch from thee?
Whence come the tears thine eyes have lent to mine?

THE POET.

Thou wilt call mine the commonest of griefs,
But 'tis man's nature to exalt himself
And think the world's affliction his alone.

THE MUSE.

It is the common mind that makes grief common ;
Let thy heart speak to mine, and gather strength,
Sharing its weight of miseries with me.

THE POET.

I know not by what name to call my grief,
If I must speak of it—whether to count it
For pride, love, madness, or just such a thing
As all men undergo ; nor can I tell
If any man can profit by the tale—
But thou shalt hear it ; take thy lyre, my Muse,
And let my memory speak to its sweet chords.

THE MUSE.

Stay, Poet ! ere thou tell me of thy grief
Bethink thee well—is it or not foregone ?
Remember that, unswayed by love or hate,
Thou must relate the story to thy Muse ;
No remnant of the passion that has wrecked thee
Must reach mine ears—unsullied they must be ;
The Poet, not the Man, should speak to me.

THE POET.

I am so far recovered from mine ills,
I cannot, when I would, remember them ;
Or if they will assert themselves, it seems
That they befell some stranger. Fear not then,
Dear Muse : thine inspiration is a shield
That shall keep both of us secure and sound.
'Tis sweet to weep, but double sweet to smile,
Remembering sorrows that we can forget.

THE MUSE.

E'en as with loving watch a mother bends
Across the cradle of her darling child,
So stoop I trembling to the wakening heart
That slept so long and gave no sign of life.
Speak, dear one, for my lyre's plaintive note
Anticipates thy voice's loved accords,
And the brave sun shines forth to sweep away,
Like a vain dream, the darkness of the past.

THE POET.

O days of work ! Mine only days of life !
O thrice-dear solitude ! praise be to heaven,
Once more my Muse descends to light these walls,
Once more my Muse and I will sing together !

To her I'll bare my heart—she shall know all !
 A woman was my tyrant ; I her slave,
 Who for one glimpse of bliss sold all my youth.
 When in the evening's light beside the brook
 We walked together on the silvered grass,
 Where the white spectral aspen marked our path,
 And the cloud-haunted moon sent trembling rays
 To give us fitful guidance ; when these arms—
 O God ! I see it all ! let me forget it !
 I guessed not then the goal of all my hopes,
 But wrathful Fate must have been poor of prey
 When it looked down and fixed its gaze on me,
 And plagued me thus for seeking happiness.

THE MUSE.

The memory's sweet that hangs about thy heart,
 'Tis fear that shuns it—let thy courage rise,
 And clasp remembrance of that happy time.
 From Fate, if it were cruel, take thy cue,
 And not in tears, but smiles, enshrine thy love.

THE POET.

No ! Smiles I keep for woe—but I have said it :
 Thou, Muse, shalt hear an unimpassioned tale
 Of all my weary dreams and bitter madness.
 I'll tell the time, the occasion, and the place—
 How I remember ! 'Twas at autumn night,
 Chilled with the solemn rhythm of falling leaves ;
 The sighing wind, striking the same sad note,
 Half lulled the dark forebodings of my spirit.
 At an unlighted window, leaning out,
 I watched with greedy eyes for her return ;
 And as I listened, through the silent dark,
 There came about my heart an unknown grief
 That grew into the monster of suspicion.
 The street was sombre—not a soul astir—
 Far off, vague human forms passed here and there,
 And the wind, happening on some yawning gate,
 Dejected, howled, as mocking human sighs.
 I know not whence the dreadful presage came
 That gave my soul unrest and choked my hope,
 She came not ; then, with hand-supported head,
 I swept the view with love-enkindled eyes.
 I have not told thee—nor no words can tell—
 The madness of the love I bore to her.
 But I had rather died ten thousand deaths
 Than lived a single day beyond her sight.
 So, while this dreadful night dragged out its length,
 I strained each nerve to break the heavy chain
 That held me captive : called her frail and false,
 And counted o'er the wrongs that she had done me.
 Then came remembrance of her fatal beauty,
 And crushed rebellion even in its birth ;
 Day broke at last, and found me caught by sleep.
 When the sun waked, I waked and looked for her.
 I heard her step, I rushed to question her :

"Whence com'st thou? from whose arms? whose kisses hang
About thy lips?" What need to tell thee more,
Or redeliver all the words that grief,
And wrath, and shame conspired to heap on her?
"Leave me!" I cried; "pale spectre of my youth,
Reseek the tomb that should have guarded thee;
Let me forget the faith I once did hold,
Or, if my memory will hold thee still,
Let me believe I dreamed of such an one."

THE MUSE.

Calm thee, my Poet, for thy very words
Have made me shudder. Oh, my love, thy wound
Is but too ready to reopen still;
Deep it must be, and this world's miseries
Most slow in their decay. Forget, my child,
And wipe from out thy memory's records
That woman's name that shall not pass my lips.

THE POET.

O shame on her who taught me truth could die!
Shame on thee, woman of the sombre glance,
Whose fatal love o'er shadows all my youth!—
'Tis thy corrupting gaze has made me curse
The very name and thought of happiness;
Thy loveliness doth measure my despair,
And, if I even doubt the truth of tears,
Why—I have seen thee weep. Oh, shame on thee!
Thou foundst me simple as a child; my heart
Opened to thine as flowers to the sun.
Shame on thee, mother of my earliest grief!
Who struck the spring of tears, that nought will check
Until they drown thy loathed memory!

THE MUSE.

Enough, my Poet! Faithless she has proved;
But though her faith had lasted but one day,
Thou shouldst not wrong that one day's memory,
If 'tis beyond the stretch of human strength
Wholly to pardon undeserved ills,
Let not thy heart be gnawed by hatred's fangs,
But for forgiveness let oblivion stand.
The dead sleep quietly within the earth:
So should dead love within the human heart.
Think'st thou that heaven's providence can sleep,
Or aim its shafts at chance? This grief of thine,
Opening thy heart, has taught thee how to live.
Man is apprenticed to his master, Sorrow,
And he knows not himself who suffers nothing.
It is a law severe—a law supreme,
Old as the world, and as fatality,
That men must be baptized in suffering.
Tears are the dew that quickens human hearts.
How shouldst thou value life's delights, if not
By having known the pain that is their price?

How shouldst thou love the garden-scented breeze,
 The birds' rejoicing anthem, and the arts
 That lend a grace to Nature, if through all
 Thou didst not hear the echo of past sighs?
 The heaven's illimitable harmony,
 The silence of the night, the murmuring flood—
 How shouldst thou love all these, unless thy pain
 Had made thee long for an eternal rest?
 What, then, is thy lament? Immortal hope
 Should spring in thee from sorrow. Wherefore hate
 Thy young experience, or deplore an ill
 From which is born thy better, wiser self?
 My child, keep pity for that faithless one
 Whose beauty caused thy tears—for she it was
 Who showed thee Sorrow's road to happiness.
 She loved thee; but the Fates had chosen her
 To bring thee face to face with life's intent—
 Pity her, for she was their instrument.
 Trust me, her tears were true; and were they false,
 Pity her still—for thou knowst how to love.

THE POET.

Thou art right: and hatred is an evil thing,
 Whose viperous writhing in our hearts sets up
 Infinity of horror. Harken, then,
 My goddess, and record this solemn vow:
 By the blue vault of yonder gracious heaven;
 By the bright sphere that borrows Venus' name,
 And pearl-like trembles in the far-off sky;
 By Nature's grandeur and almighty love;
 By the firm star that is the sailor's guide;
 By all the meadows, all the woods and groves;
 By life's omnipotence—ay, by the pith
 That doth invigorate the universe,
 I banish thee forever from my mind—
 Wreck of a maddening and insensate love,
 Dead memory of a bygone tale of woe!
 For thee, who wert my heart's love—my soul's life,
 The moment of forgetfulness shall be
 The time of pardon—each shall pardon each.
 The charm is broken, and with one last tear
 I waft thee to the echoes of the past.
 Now, Muse, to *our* loves! Inspire me straight
 As thou wert wont, with some all-joyous song!
 See how the flower-laden lawn awakes,
 To take the morning; see how startled night
 Rolls, layer on layer, off before the dawn!
 We two will rise again to newer life
 Beneath the blessing of the sun's first rays!

Temple Bar.

ERASMUS DARWIN.

TOWARD the close of the last century which from time to time exercise an im-
 Lichfield became the headquarters of portant influence upon the fashion of
 one of those mutual admiration societies literature. The leader of the coterie

was the Reverend William Seward, a canon-residentiary of Lichfield, who by a somewhat curious arrangement occupied the palace of the non-resident bishop. Boswell talks of him as "a genteel, well-bred, dignified clergyman," and as he held several considerable pieces of preferment and left a handsome fortune behind him, the description is probably accurate enough. Johnson's opinion of Seward was less flattering. "Sir," said he to Boswell on their way from Lichfield to London in 1776, "his ambition is to be a fine talker, so he goes to Buxton and such places, where he may find companies to listen to him, and, sir, he is a valetudinarian, one of those who are always mending themselves." The doctor added some remarks about a "hog in a sty," which it is hardly necessary to repeat. Seward had some pretensions to literature. He had edited, in conjunction with one Simpson, an edition of Beaumont and Fletcher, and he published some verses in Dodsley's collection which were greatly admired—by his family. The rest of the coterie were literary after the same fashion. Among those who composed it were "the ingenious Mr. Keir of West Bromwich, and the accomplished Dr. Small of Birmingham; "Sir Brooke Boothby, who "so ably refuted" Mr. Burke on the French Revolution; Mr. Munday of Marketon, "whose 'Needwood Forest' is one of the most beautiful local poems that has been written;" the Rev. Archdeacon Vyse, "not only a man of learning but of Prioric talents in the metrical impromptu;" Mr. Robinson, "a choice spirit of Lichfield;" Day, the philosophical author of "Sanford and Merton;" Richard Lovell Edgeworth, then lately married to his first wife; and if last, not least, Anna Seward, to whose "lettered taste" the phrases quoted above are due. Among those who occasionally occupied places in Anna's drawing-room were Watt the engineer and his partner Boulton from Birmingham, Dr. Priestley, the eccentric Lord Monboddo, Sir Joseph Banks, and Dr. Parr—all, it will be remarked, good Whigs, and all men with some claim to the title of philosophers.

Of this society Erasmus Darwin was the object of reverential admiration, and

his voluminous works in prose and verse the theme of their eternal applause. From the candid admissions of his friends and associates, it may be gathered, however, that it was the philosopher more than the man who was admired. To put the matter plainly, he was an ugly fellow, and his manners were clownish in the extreme. Anna Seward describes him as of "large and athletic frame," but Edgeworth is more candid. Darwin struck him as being "a large man, fat and rather clumsy." He was much pitted with the small-pox, and in conversation "stammered exceedingly." The portraits of him which are extant fully bear out this description, showing him to have possessed a coarse and heavy face with remarkably clumsy features, a nose of the thick Hebrew type, and a mouth of peculiarly bitter and sarcastic expression. Wedgwood's well-known cameo, reproduced in Miss Meteyard's "Life" of the illustrious potter, is obviously idealized beyond the point of recognition. Mrs. Schimmel-Penninck's less flattering description corresponds far more accurately with Rawlinson's uncompromising portrait. The mouth was indeed the index to Darwin's character. He was sneering, sarcastic, and sceptical in no common degree. Anna Seward especially remarks, in that inverted style of which she was so fond, "extreme was his scepticism to human truth." She is also somewhat enthusiastic concerning his sarcastic wit, but it cannot be said that the specimens of his conversational powers which his admirers have preserved are likely to impress the modern reader very favorably. Thus, for example, his friend Mr. Robinson, the "choice spirit of Lichfield" before mentioned, had in conversation with him "thrown the bridle upon the neck of his fancy, and it was scampering over the churchyard and into the chancel" (by which we are to understand that he was talking blasphemy), upon which Darwin exclaimed, "Excellent! Mr. Robinson is not only a clever fellow but a d—d clever fellow." On another occasion this same "choice spirit" delivered a mock eulogium upon swearing, ironically dilating on its power to animate dulness and to season wit. Darwin's remark, which appears to have ex-

cited great admiration among his friends, was, "Christ says swear not at all; St. Paul tells us we may swear occasionally; Mr. Robinson advises us to swear incessantly. Let us compromise between these counsellors and swear by Non-entities. I will swear by my Im-pu-dence and Mr. Robinson by his Mo-dest-y." If these were the "terrific sarcasms" at which the *literati* of Lichfield trembled, one is inclined to think that, like the conies, they must have been "a feeble folk." Sometimes Darwin appears to have mistaken rudeness for wit, and to have labored under the not uncommon delusion that when you have called a man a fool you have annihilated him with an epigram. Thus on one occasion a lady who was visiting Lichfield waited upon him with a letter of introduction. Adapting her conversation to her company, as she imagined, she addressed him in the affected manner in favor with the Della Cruscan school. Divested of its absurdity of form, however, her question was simple enough. She wished to know what there was of interest in art, literature, or science in Lichfield. Darwin replied in not less stilted phrase with a recommendation to her to go to the bull-running at Tutbury. The lady was naturally somewhat disconcerted, but after a moment's pause she said: "I was recommended to a man of genius, and I find him insolent and ill-bred," with which she retired from Darwin's presence. Miss Seward is loud in her applause of the doctor's prompt and ready wit on this occasion; but it will probably be held that the lady had the best of the passage of arms.

Besides being a wit, Darwin was a teetotaler, or almost one, and, as is not unfrequently the case with those who abstain from wine, he was utterly intolerant of its use by other people. On the other hand, he was a great eater, especially of animal food, and of fruit both raw and cooked. If he drank wine at all, which he did but rarely, he confined himself to those pleasing compounds known as "made" wines—cow-slip wine, currant wine, and what Mrs. Hoggarty of Castle Hoggarty was accustomed to call "Rosolio"—which he diluted with water. It was, perhaps, as well that the ingenious doctor should re-

frain from more intoxicating beverages, for he does not seem to have been gifted with what is commonly described as a strong head. A story is told of an adventure of his which is hardly likely to impress the present generation as deeply as it impressed his own, with reverence for his habitual wisdom and temperance. It would seem that on a certain day in summer, while Darwin was living at Lichfield, a party was made up by some friends to sail down the Trent from Burton to Nottingham, and thence to Newark. A good luncheon was put on board, together with an abundant supply of wine, and Darwin took his fair share of both. Just before the boat reached Nottingham he quietly dropped from it and swam to the shore. His friends hurried on to the town, where they found him in the market-place, making a speech to the crowd on the importance of ventilation. The local apothecary urged him to go to his house and provide himself with dry clothes; but to this invitation he turned a deaf ear, assigning for his eccentricities the highly philosophical reason that the internal heat caused by the wine he had taken would amply suffice to counteract the cold caused by the external application of water. It is only fair to add, however, that this story rests mainly upon the statement of Miss Seward, whose veracity is anything but unimpeachable. Mr. Charles Darwin says, on the authority of one of his stepsons, that this half tipsy freak was the result of a trick played upon him by some gentleman of the party.

In his family relations Darwin appears to have been not wholly unamiable, though it was, perhaps, hardly to be expected that so eminently philosophical a personage should find much room for commonplace affections in that portion of his anatomy which he was pleased to call his heart. His first wife, whom he married when he was twenty-six, was a Miss Howard of the Cathedral Close of Lichfield, the local influence of whose family was of unquestionable value from the professional point of view. She was little more than a child at the time of her marriage, and speedily fell into ill-health. After thirteen years of suffering she died, expressing rapturous adoration of her husband with her last breath. He

remained a widower for some years, but about 1777, a certain Mrs. Pole, wife of Colonel Pole, came from Derby to Lichfield to consult him about the health of her children. A tender friendship sprang up between them, and, when Mrs. Pole returned to her home, a complimentary correspondence began, which was continued for a considerable time. On Colonel Pole's death, his widow visited Lichfield, and as she was still young, wealthy, and agreeable, she soon had a crowd of suitors at her feet. Somewhat to the surprise of her friends, she rejected them all in favor of Darwin, whose greatest flatterers hardly venture to describe him otherwise than as a somewhat morose and certainly rather ill-favored man of fifty. Despite remonstrance, they were married, the bride making only one condition—that their future home should be at Derby instead of Lichfield. Thither they accordingly removed in 1781, and there a new family grew up around the philosophical doctor. His children by his first wife had been educated and launched upon the world, the high reputation which he enjoyed serving as an excellent introduction to their professional career. Their father's affection for them seems to have been, however, somewhat feeble, though not quite so wholly extinct as Miss Seward tried to make out. On the strength of a hearsay report she ventured on a most cruel charge of selfishness and heartlessness on the occasion of his eldest son's death, which she was afterward compelled to retract unreservedly. According to her story, the suicide of his unfortunate son produced no other remark from Darwin than the exclamation, "Poor insane coward!" after which he never mentioned his name, and devoted himself to the task of realizing his property. But though this tale is utterly unfounded, Mr. Charles Darwin is forced, in his somewhat laudatory sketch of his grandfather's life, to admit that his own father, Dr. Robert Darwin, had been treated by him "somewhat harshly and imperiously, and not always justly." Mr. Darwin adds, "Though in after years he felt the greatest interest in his son's success, and frequently wrote to him with affection, in my opinion the early impression on

my father's mind was never quite obliterated."

With such a man, and such a society as that by which he was surrounded, Johnson could have but little sympathy. His leading characteristic, next to his genuine and unaffected warm-heartedness, was, as Mr. Carlyle has pointed out, a sincere and manly simplicity, which naturally rebelled against the mannerisms and affectations of Darwin's provincial coterie of admirers, and he must have felt, besides, an internal consciousness of genius, which would effectually remove him from association with "the ingenious Mr. Keir" and the philosophical Mr. Day. Politics and religion both interfered, moreover, to keep him out of the Darwinian clique. His own creed was simple enough, and might be summed up in the five words, "Fear God: honor the King." Theirs was much more philosophical. Whether there was a God at all was a matter about which they were by no means certain. On the whole they thought that it was, perhaps, as well to admit the existence of a "Great First Cause," but they knew very little about him, and they troubled themselves still less. Instead of a religion, they had a neat philosophical system which explained everything and accounted for everything. Natural science was as yet in its infancy, but the philosophers of the eighteenth century imagined that they had explored all the secrets of nature when—to use the simile of Newton—they had picked up a few shells on the sea-shore of Eternity. It is amusing and at the same time humiliating to read the dissertations of the early chemists, with their infantile babble about "fixed air," "phlogistic and anti-phlogistic substances," and the like, and then to turn from them to the self-satisfied speculations of the Darwinian school, who seem to have imagined that they had arrived at the end of all knowledge, when in truth they were only on its threshold. Johnson unquestionably realized the limitations of human attainment, and shrank from identifying himself with an imperfect science, which began by doubting all that he believed most firmly, and which, while denying the existence of a living and personal God,

offered a handful of chemical products as a substitute for him. Nor was his political faith less offended by the speculations of the philosophers whose cosmopolitanism was already leading them to sympathize with the enemies of their country, and who a few years later allied themselves with the forces which convulsed Europe. Whenever, therefore, he visited Lichfield, he avoided as much as possible the literary clique of which Darwin was the centre. For Darwin himself, whom he met only once or twice, he entertained, according to Duppa—who in this matter repeats Anna Seward—a strong dislike, which on his part Darwin cordially returned. Nor did the dilettante science and philosophical liberalism of Miss Seward's tea-table possess any greater attractions for him. He went there now and again, but his strong sincerity and robust convictions affrighted the timid, trembling scepticism of the excessively refined lady who presided over it. Finding himself without a welcome, he remained among the friends of his youth, and we can, perhaps, hardly wonder at his choice. Miss Lucy Porter, his much-loved step-daughter, who was not ashamed to help her friend by serving behind the counter of her little shop on market days, is on the whole a more agreeable figure than Miss Anna Seward, engrossed in the composition of elaborate impromptus, to be let off for the edification of her clique at the first favorable opportunity. On her side Anna Seward fully returned Johnson's dislike, and almost contempt, and lost no opportunity of manifesting her hostility to him both before and after his death. Thus she repeatedly speaks of him by Churchill's nickname of "Pomposo;" she calls him "the arrogant Johnson;" asserts that he "liked only worshippers;" and after his death started a ridiculous and cruel story of an uncle who, she was wont to declare, had been hanged. His greatest offence in her eyes, next to his obstinate toriosity, was that he did not share her reverence for Darwin. "It is curious," she remarks in one place, "that in Dr. Johnson's various letters to Mrs. Thrale, now Mrs. Piozzi, published by that lady after his death, many of them at different periods dated Lichfield, the name of Darwin cannot be found, nor

indeed that of any of the ingenious and lettered people who lived there, while of its mere common-life characters there is frequent mention."*

If, however, Johnson neglected and despised Darwin, Miss Seward fully made up for his want of appreciation. Speaking of his "Botanic Garden," which was first published in 1781, she says:

"We are presented with a highly imaginative and splendidly descriptive poem, whose successive pictures alternately possess the sublimity of Michael Angelo, the correctness and elegance of Raphael, with the glow of Titian; whose landscapes have at times the strength of Salvator, and at others the softness of Claude; whose numbers are of stately grace and artful harmony; while its allusions to ancient and modern history and fable, and its interspersions of recent and extraordinary anecdotes (among which, by the way, is the fable of the Upas Tree) render it extremely entertaining."

Anna's enthusiasm was shared by others. Prefixed to the poem, after the fashion of the seventeenth century, are a number of commendatory verses by different writers. Unfortunately, three of the five authors—the Rev. W. B. Stephens, R. Polwhele, and F. N. C. Mundy—are totally forgotten. Cowper and Hayley joined in laudation of the "sweet harmonist of Flora's Court," and assured him of his right to a high place among the poets. "We," says Cowper—

"We deem the bard whoe'er he be,
And howsoever known,
Who would not twine a wreath for thee,
Unworthy of his own."

Hayley in a fanciful copy of verses describes Nature presenting science with Darwin's poem, in which both see them—

* Yet Johnson had a very high opinion of Lichfield people. Under date 1776 Boswell writes: "He expatiated in praise of Lichfield and its inhabitants, who he said were 'the most sober, decent people in England, the genteelst in proportion to their wealth, and spoke the purest English.' I doubted as to the last article of this eulogy," adds Boswell, "for they had several provincial sounds, as *there* pronounced like *fear* instead of *fair*; once pronounced *woonse* instead of *wunse* or *wonse*. Johnson himself never got entirely free of these provincial accents. Garrick sometimes used to take him off, squeezing a lemon into a punch-bowl with uncouth gesticulations, looking round the company and calling out, 'Who's for *poonsh*?'"

selves reflected, upon which Nature exclaims :

"Yes, in this mirror of the bard,
We both embellished shine,
And grateful will unite to guard,
An artist so divine !

This with delight two poets heard,
Time ratifies it daily,
Trust it, dear Darwin, on the word
Of Cowper and of Hayley."

The "Botanic Garden," concerning which these pretty things were said, is dead now beyond all hope of resurrection, and it would be utterly forgotten were it not for the immortal parody of its second part, the "Loves of the Plants," which Canning, Gifford, and Frere contributed to the *Anti-Jacobin* under the title of the "Loves of the Triangles." As Mr. Hannay, a fine critic, whose genius was wasted in journalism, has remarked, "Other poems live in spite of ridicule; Darwin's 'Loves of the Plants' in consequence of it. The Attic salt of his enemies has preserved his reputation." Turning back to it, one wonders how such frigid, tawdry, turgid stuff could ever have found readers and admirers. Yet it was singularly successful in its day. The booksellers paid the author a great price for it, Mrs. Schimmel-Penninck says, for the copyright or for the edition, she is not sure which, ten shillings a line,* and brought it out in a sumptuous fashion, with costly botanical plates and illustrations after Fuseli. Cowper honored it with a criticism in the *Analytical Review*, which mainly serves to prove that a great poet may be but a second-rate critic, especially when he praises a brother poet for excellencies to which he himself makes no pretension. The distinctive merits of Cowper's poetry are its directness, simplicity, and naturalness. Darwin's poetry is the very reverse of all this, and, accordingly, we find Cowper praising the "fine writing" of the "Botanic Garden." "The descriptions are," he says, "luminous as language

selected with the finest taste can make them, meeting the eye with a boldness of projection unattainable by any hand but that of a master." Cowper's accustomed fine sense of propriety seems, indeed, to have wholly deserted him in writing this review. He selects, for example, as a matter for special commendation, Darwin's expression "eyetipt horns" as applied to the snail, and declares that an ordinary writer would not have said so much in half a dozen labored couplets, which may be true, but which, considering that the impression which it is designed to convey is utterly inaccurate, is wholly beside the question.

Mathias, "the nameless bard" of the *Anti-Jacobin*, and author of the "Pursuits of Literature," criticises the "Botanic Garden" with much more justice. In the course of one of his voluminous notes he says :

"I wish men would peruse the treatise 'De Causis Corruptionis Eloquentiæ' before they attempt, by prettinesses, glittering words, points, conceits, and forced thoughts, to sacrifice propriety and just imagery to the rage of mere novelty. This will always be the case when writers in prose or verse (if I may be allowed to use Sancho's phrase a little metaphorically) 'want better bread than is made of wheat.' Modern ears are absolutely debauched by such poetry as Dr. Darwin's, which marks the decline of simplicity and true taste in this country. It is to England what Seneca's prose was to Rome. 'Abundant dulcibus vitiis.' Dryden and Pope are the standards of excellence in this species of writing in our language, and when young minds are rightly instituted in their works, they may without much danger read such glittering verses as Dr. Darwin's. They will then perceive the distortion of the sentiment and the harlotry of the ornaments. It would also be a happy thing for all naturalists, whether poets or writers in prose, if they would, in the words of a true poet, 'Look through Nature up to Nature's God.' Dr. Darwin is certainly a man of great fancy, but I will not cease to repeat that good writing and good poetry require something more."

The origin of the "Botanic Garden" was somewhat curious. Toward the close of the eighteenth century the Linnæan system of botany began to make its way among scientific men, and Darwin was one of the first to take it up. His zeal in the matter was, however, less contagious than might have been expected, and of all the coterie of Lichfield he succeeded in enlisting only two recruits for his botanical society. These

* The "Botanic Garden" contains 4334 lines, which at this rate would make the copy money £2167. Mr. Charles Darwin says that he has heard his father say that a thousand guineas were paid before publication for the part which was published last—i.e., for the "Economy of Vegetation," which contains rather more than one half of the poem.

were Sir Brooke Boothby, and a proctor of the Cathedral Close—one Jackson, whom Anna Seward calls a "turgid and solemn coxcomb," but of whom we know nothing more. The three formed the Botanic Society of Lichfield, and regularly published "Transactions" after a fashion which created an impression in other quarters that that sleepy little city was really a headquarters of scientific research. In process of time Darwin thought it desirable to establish a garden for experimental and scientific purposes, and for this he had a model ready to his hand. Mr. Sneyd, of Belmont, father to two of Richard Lovell Edgeworth's wives, possessed a remarkably picturesque garden on his moorland property. It consisted of a deep glen amidst the rocks, through which a mountain stream made its way. This glen he caused to be cleared out and planted, while at the bottom he excavated a chain of small lakes communicating with each other and fed by the stream. These lakes covered an area of about five acres, though they were nowhere more than seventy feet wide, and at the end of the glen the water fell over a rocky cascade of some forty feet in height. On the model of this garden Darwin laid out "a little wild umbrageous valley," in the immediate neighborhood of Lichfield. It is worth while to quote a sentence or two from Miss Seward's account of this garden:

"It was," she says, "irriguous from various springs, and swampy from their plenitude. A mossy fountain, of the purest and coldest water imaginable, had near a century back induced the inhabitants of Lichfield to build a cold bath in the bosom of the vale. That, till the doctor took it into his possession, was the only mark of human industry which could be found in the tangled and sequestered scene. One of its native features had long excited the attention of the curious—a rock which in the central depth of the glen drops perpetually about three times in a minute. Aquatic plants border its top and branch from its fissures. No length of summer drought abates, no rains increase its humidity, no frost congeals its droppings," etc.

To this paradise Miss Seward was accustomed to resort, and by her own account on her first visit she wrote an invocation beginning

"Oh, come not here ye proud whose breasts
in fold
Th' insatiate wish of glory or of gold,"

and extending over twenty-three couplets. The verses were presented to Darwin by the author, and elicited from him the declaration that they ought to form the exordium of a great work.

"The Linnæan system," said he, "is unexplored poetic ground, and an happy subject for the muse. It affords fine scope for poetic landscape; it suggests metamorphoses of the Ovidian kind, though reversed. Ovid made men and women into flowers, plants, and trees. You should make flowers, plants, and trees into men and women. I will write the notes, which must be scientific, and you shall write the verse."

Miss Seward replied with engaging modesty that the subject was not a proper one for a "female pen," and begged him to undertake the work, which, after a due amount of pressing, he at length consented to do. The forty-six lines composed by Miss Seward were, with some alterations, incorporated in the exordium of the first part of the "Botanic Garden" and published in the *Gentleman's Magazine*, and afterward in the *Annual Register* with Darwin's name. As it was not until after his death that Miss Seward laid claim to these verses, and as the details she gives on other points are curiously inaccurate, it is possible that there may have been some mistake in the matter, and that these verses, as well as the remainder of the poem, may be Darwin's own property. The whole matter is, however, confused and inexplicable, and may probably be set down as one of Miss Seward's romances.

As a poem the "Botanic Garden" has been praised too highly, and laughed at with too little mercy. Its form lent itself readily to satire, and the genius of Canning and his colleagues of the *Anti-Jacobin* has made the "Loves of the Triangles" immortal. It may, however, be doubted whether they would have troubled themselves with the absurdities of the "Loves of the Plants" had not the author belonged to that school of English politicians who sympathized with the French Revolution, who clamored for parliamentary reform, who applauded the secession of the American colonists, and whose zeal for liberty was so great as not unfrequently to degenerate into licentiousness. If Darwin had refrained from eulogizing Franklin, sneering at kings and praising the "new morality," he might, with impu-

nity, have carried on his eternal personifications and have published the eccentric notes by which he explains them. In that case, however, the poem would have passed into oblivion even sooner than it did. At its best it is about on a level with a fairly good Newdigate prize poem; at its worst it is dreary bathos. It is easy to understand the indignation with which Gifford or Canning would receive a passage like the following (from the second canto of the "Economy of Vegetation"), which may serve to illustrate the politics of the author:

"So, borne on sounding pinions to the West,
When tyrant Power had built his eagle-nest;
While from the eyry shriek'd the famish'd brood,
Clenched their sharp claws and champ'd their beaks for blood,
Immortal FRANKLIN watched the callow crew,
And stabb'd the struggling vampires ere they flew.
The patriot flame with quick contagion ran,
Hill lighted hill and man electrized man;
Her heroes slain, awhile Columbia mourn'd,
And crowned with laurels, Liberty return'd.
The warrior, Liberty, with bending sails,
Helm'd his bold course to fair Hibernia's vales;
Firm as he steps along the shouting lands,
Lo! Truth and Virtue range their radiant bands;
Sad Superstition wails her empire torn,
Art plies his oar and Commerce pours her horn.
Long had the giant form on Gallia's plains
Inglorious slept, unconscious of his chains;
Round his large limbs were wound a thousand strings
By the weak hands of Confessors and Kings!
O'er his closed eyes a triple veil was bound,
And steely rivets lock'd him in the ground;
While stern Bastile with iron cage enthralls
His folded limbs and hems in marble walls.
—Touched by the patriot flame, he rent, amazed,
The flimsy bonds, and round and round him gazed;
Starts up from earth above the admiring throng
Lifts his colossal form and towers along;
High o'er his foes his hundred arms he rears,
Plowshares his swords and pruning hooks his spears;
Calls to the good and brave with voice that rolls
Like Heaven's own thunder round the echoing poles;
Gives to the winds his banner broad unfurl'd,
And gathers in its shade the living world!"

A passage such as this, published while all Europe was trembling beneath the shock of the French Revolution, naturally aroused the wrath of English constitutionalists, and when they found, two or three pages back, such lines as the following, a burlesque suggested itself as a matter of course:

"Gnomes! as you now dissect with hammers fine
The granite rock, the noduled flint calcine;
Grind with strong arm the circling chertz betwixt
Your pure Kaolins and Petuntzes mixt;
O'er each red saggar's burning cave preside,
The keen-eyed fire nymphs blazing by your side."

The poetic taste of the time was in truth at a miserably low ebb, and those who professed to be its arbiters seem to have been at least as ignorant as their pupils. Witness the following criticism by Horace Walpole:

"The 'Triumph of Flora,' beginning at the fifty-ninth line, is most beautifully and enchantingly imagined; and the twelve verses that by miracle describe and comprehend the creation of the universe out of chaos, are in my opinion the most sublime passages in any author or in any of the few languages with which I am acquainted."

These are certainly big words, and when we remember what English literature can boast in the matter of sublimity, we look with some curiosity to discover what it is which so enraptured the critic of Strawberry Hill. It will perhaps excite some amusement in the reader's mind to discover that the sublimest passage in literature in his opinion was the following:

"'Let there be light!' proclaimed the Almighty Lord.
Astonished Chaos heard the potent word;
Through all his realms the kindling ether runs,
And the mass starts into a million suns;
Earths round each sun with quick explosions burst,
And second planets issue from the first;
Bend as they journey with projectile force,
In bright ellipses their reluctant course;
Orbs wheel in orbs, round centres centres roll,
And form self-balanced one revolving whole
Onward they move amid their bright abode,
Space without bound, the Bosom of their God!"

In its way this passage may be admitted to be not without force, but it is the force of rhetoric rather than of poetry, and, curiously enough, it may

be paralleled in half a dozen places in the volume. And as the really striking passages are few and far between, while page after page is filled with technicalities and personifications, it is easy to understand why the great popularity of the poem rapidly passed away. Darwin failed as a poet, not from any deficiency of learning, or through any want of power to master the technical mysteries of the poetic art, but because he started on a false theory. Miss Edgeworth says that he had an idea that poetry consists in "painting to the ear," by which not very lucid phrase she apparently intended to say that the poet's task is to do by words what the painter does with his colors and canvas. If Darwin ever expressed himself to this effect it needs no elaborate argument to prove that he knew but half the domain of the poet, and that of that loftier part of his mission which deals with human passion and human affection he had no idea whatever. Now, as a very acute critic has remarked of another didactic poet, "no poetry can maintain its ground unless it deal with either the heart or the intellect," and it cannot be said that the "Botanic Garden," laborious and learned though it be, touches either the one or the other. Science and fiction are jumbled together, but the admixture is, to use a Darwinian metaphor, mechanical and not chemical. The poetical machinery is at best a clumsy and laborious allegory, so enigmatical in character as to render necessary a constant reference to the notes; absurd in itself, and beyond conception wearisome through its repetitions. As another writer has observed:

"Darwin had the eye and the ear of a poet, and the creative mind; but his writings have served to show that these are of little avail without the heart, and the heart was wanting in him."

One other point appears to call for remark. Darwin's theories of versification were very singular. Miss Seward mentions that he "ever maintained a preference of Akenside's blank verse to Milton's;" he had also a contempt for sonnets, especially for those of Milton, though it might have been thought that those on "The Late Massacre in Piedmont," "On his Blindness," and "On his Deceased Wife," were majestic

enough in rhythm and cadence, even for a poet who placed those qualities in the first place; and, finally, he fancied he could improve upon the versification of Pope by exceeding him in polish and by making every line as sonorous as possible—a process which, when applied to mean and commonplace matters, has a curiously ludicrous effect. No better illustration of his failure in this respect could be afforded than the passage descriptive of Brindley's labors in connection with internal navigation, a passage which, we may remark by the way, Miss Seward describes as "supremely happy:"

"So with strong arm, immortal Brindley leads
His long canals and parts the velvet meads;
Winding in lucid lines the watery mass
Mines the firm rock or loads the deep
morass;
With rising locks a thousand hills alarms;
Flings o'er a thousand streams its silver
arms:
Feeds the long vale, the nodding woodland
laves,
And Plenty, Arts, and Commerce freight the
waves."

Following these prosaic verses comes a long prose description of a monument which Darwin suggested as an appropriate adornment to the Cathedral of Lichfield, while at the foot of the page is a note dilating upon the scandal of leaving so great a man unhonored. The incongruity of all this with the purpose of poetry hardly requires to be pointed out, but the explanation of its appearance is simple enough. Darwin was an enthusiastic admirer of Brindley and his engineering schemes, and took a very practical interest in their execution. At one time he even went so far as to contemplate the construction at his own cost of a small canal to connect Lichfield with the Grand Trunk at Fradley Heath, which, according to his grandson, was to have been only a foot deep and to have borne only boats of four or five tons burden, which could be dragged by a man. That scheme was abandoned, but the existing canal was in a great measure due to his initiative.

Thirteen years after the publication of the "Botanic Garden" Darwin produced his "Zoonomia; or, the Laws of Organic Life," a work in which speculation and empiricism are curiously mingled. He seems to have been perpetu-

ally engaged in contemplation of the mysteries of generation and reproduction, but it cannot be said that his guesses are invariably happy. Thus, in one place he maintains that man was originally an oyster, sprung into being by chance, and that by time alone he became first an amphibious and then a terrestrial animal. In the "Zoonomia" he threw over all speculations of this kind. The design of his book was to reform the system of medicine by putting forth a new science of life. Henceforward, the origin of humanity was to be traced to "filaments." He does not recognize a God, though in his posthumous poem, "The Temple of Nature," he makes patronizing reference to the Great First Cause; and his creed at the "Botanic Garden" and "Zoonomia" period may best be judged by what we learn from his contemporaries. Mrs. Schimmel-Penninck, in the interesting fragment of autobiography which was published by her family a few years ago, allows us to see with tolerable clearness what his views really were. It is hardly necessary to say that he laughed at the idea of Christianity. On one occasion some person expressed a hope that he would one day accept it, and in reply he said, "Before I do, you Christians must be all agreed. This morning I received two parcels, one containing a work of Dr. Priestley's proving that there is no spirit, the other a work by Berkeley, proving that there is no matter. What am I to believe among you all?" From such a man it is obvious that the religious sense was in some way absent, and he certainly lost no opportunity of proving that it was. Consulted on one occasion by the friends of a devout young lady in very delicate health, he recommended them to "toss her religious books into the fire except Quarles's 'Emblems,' which may make her laugh." He further lost no opportunity of declaring himself a materialist in the grosser sense of the term. He often used to say, we learn from Mrs. Schimmel-Penninck, that "man is an eating animal, a drinking animal, and a sleeping animal, and one placed in a material world, which alone furnishes all that the human animal can desire. He is gifted, besides, with knowing faculties, practically to explore and apply the resources of the

world to his use. These are realities. All else is nothing. Conscience and sentiment are but mere figments of the imagination. Man has but five gates of knowledge—the five senses. He can know nothing but through them; all else is a vain fancy; and as for the being of a God, the existence of a soul, or a world to come, who can know anything about them? Depend upon it, my dear madam, these are only the bugbears by which men of sense govern fools; nothing is real that is not an object of sense."*

It is hardly necessary in this place to vindicate the spiritual nature of man. A doctrine so universally implanted in the human mind is not likely to be destroyed because a handful of "philosophers," whose vanity is at least equal to their attainments, choose to invent a new god for themselves. Nor can it be said that Dr. Darwin's new theories were much to be preferred to the old. His notion, as developed in the "Zoonomia," is that all life originates in sensitive filaments. "Give me," he says, "a fibre susceptible of irritation, and I will make a tree, a dog, a horse, a man." Elsewhere he says ("Zoonomia," vol. i. 493):

"I conceive the primordium or rudiment of the embryo, as secreted from the blood of the parent, to consist in a single living filament as a muscular fibre which I suppose to be the extremity of a nerve of locomotion, as a fibre of the retina is the extremity of a nerve of sensation, as, for instance, one of the fibrils which compose the mouth of an absorbent vessel. I suppose this living filament of whatever form it may be, whether sphere, cube, or cylinder, to be endued with the capacity of being excited into action by certain kinds of stimulus. By the stimulus of the surrounding fluid in which it is received from the male, it may bend into a ring and thus form the beginning of a tube. This living ring may now embrace or absorb a nutritive particle of the fluid in which it swims, and by drawing it into its pores, or joining it by compression to its extremities, may increase its own length or crassitude, and by degrees the living ring may become a living tube. With this new organization or accretion of parts new kinds of irritability may commence."

And so on. Enough has probably been

* Mr. Darwin disputes Mrs. Schimmel-Penninck's accuracy in this as in other matters. It may be that, writing as she did after the lapse of many years, she may have fallen into some errors of detail, but of her general truthfulness it is impossible to entertain a doubt.

quoted, however, to show the nature of the philosophy which this materialistic leader professed. We need not attempt a discussion of its value. Voltaire, in a famous passage of not very decent sarcasm, has said all that is necessary on this subject. Nor need we trouble ourselves very much about some other speculations of the same kind in which Darwin indulged. He may be found, for example, speaking with approbation of a philosopher—unnamed, but presumably himself—who thought it not impossible that the first insects were the anthers or stigmas of flowers, which had by some means loosed themselves from the parent plant. From these he imagines that other insects may have been formed in the course of a long period of time, some acquiring wings, others fins, and others claws from their ceaseless efforts to procure food or to protect themselves from injury. "None of these changes," he adds, "are more incomprehensible than the transformation of tadpoles into frogs or caterpillars into butterflies."

In spite of all the apparent philosophy of these speculations, it may be doubted whether Darwin possessed a really scientific mind. The ideas upon which his "Botanic Garden" is based were derived entirely from a study of the Linnaean system, and—not to speak profanely—that immortal work itself is apt to remind the reader of those histories of England in rhyme which enterprising school mistresses indite with the object of assisting the feeble memories of their pupils. The religious and moral reflections of these latter specimens of "goody" literature have their counterpart in the outbursts of rather dreary scepticism—religious and political—in which the "Botanic Garden" abounds. Nor is much more to be said for the imagined identity of animal and vegetable life, which Darwin appears to conceive to have been completely made out. That nature is a great and harmonious whole was known long before the philosophers of the eighteenth century began to speculate concerning her operations. A hundred and fifty years before, one Francis Bacon, enlarging upon an idea which was familiar enough to the students of the Platonic philosophy, had worked upon these lines, and it is impossible to think the theories of develop-

ment and evolution, as propounded in the passages quoted above, either a legitimate deduction from or a worthy completion of the Baconian idea. In these speculative matters, as in the practical work of his profession, it is to be feared that Erasmus Darwin must be pronounced an empiric after all. The present generation can only judge him by his books, and it must be admitted that they do not afford the reader a very high idea of his genius as a physician. He is, it is true, accredited with many wonderful cures. He jumped into celebrity, for example, at Lichfield, by the treatment of one Mr. Ings, who had been given over as dying by the local practitioner. Darwin reversed the treatment and saved the patient. Another case was that of a lady who was suffering from internal hæmorrhage. It is related by Miss Seward with a very circumstantial account of her own offer to allow the doctor to take from her sufficient blood for the operation of transfusion. Darwin found that the London physicians had been treating her with stimulants—wine, brandy, and so forth—and keeping her upon the strongest food, in its most concentrated form, with the natural result of increasing the hæmorrhage. He adopted a milk diet, with abstinence from wine and everything that was likely to set up inflammatory action, and he succeeded in effecting a cure. The ulceration, from which the bleeding had arisen, had time to heal, and nature to reassert itself. For the rest his practice would seem to have been pretty much that of his contemporaries, though he was certainly in advance of the majority of them on questions of sanitary science, such as ventilation, drainage, and pure water. He appears to have even anticipated the modern practice with regard to the administration of stimulants in cases of fever, but his remedies seem to the non-professional reader of "Zoonomia" somewhat startling in their severity. He was a great believer in the value of bleeding, and his lancet was constantly in requisition. Even in his own case he used it repeatedly for the relief of *angina pectoris*—a disease which would be treated by modern physicians with the strongest stimulants. Miss Seward gives a long and circumstantial account

of the manner of his death, and of his personal appearance during the latter part of his life. Some of the details have been repudiated by his family, but sufficient is left unchallenged to prove that the frequent bleedings to which he had subjected himself had seriously injured his constitution. According to her story he was actually entreating his wife and daughter to bleed him at the very moment of his death. That part of the tale may fairly be dismissed as another example of Miss Seward's too fertile imagination. All that is necessary to record in this place is that he died somewhat suddenly, on the 18th of April, 1802, in his seventy-first year, at Breadsall Priory, near Derby, where he had been living during the last two years of his life.

His wife placed over his tomb, in

Breadsall Church, a tablet recording "the rare union of talents, which so eminently distinguished him as a physician, a poet, and a philosopher," of which she believed that his writings would remain "a public and unfading testimony." The latest of his admirers, Herr Krause, offers an interesting comment on this anticipation in the excellent monograph on Darwin's scientific writings, which has recently been introduced to English readers by Mr. W. S. Dallas.

"Erasmus Darwin's system," he says, "was in itself a most significant first step in the path of knowledge, which his grandson has opened up for us; but to wish to revive it at the present day, as has actually been seriously attempted, shows a weakness of thought and a mental anachronism which no one can envy."

Temple Bar.

THE CHAIN OF LIFE IN GEOLOGICAL TIME.*

"AN interesting little volume just issued under the above title—perhaps the least original portion of its contents—gives a clear sketch of the origin and succession of animals and plants on the earth from the days of the primeval organism, through all the phases of its progressive development, up to the reign of mammals and the advent of man. Its author, Principal Dawson, of Montreal, has already contributed several works of a similar nature, such as "The Origin of the World" and "The Story of the Earth and Man," etc., to popular geological literature. In the scientific world he is well known as the founder of a fourth great life period antecedent even to the ancient life epoch (Palæozoic), to which he has given the name of the Eozoic, or dawn period (*eos*, dawn, *zoe*, life), as signifying his belief that it contains the earliest records of life on the earth. To the geological era thus constituted he refers the Laurentian and Huronian series of deposits developed in such enormous masses in the region of his Canadian home. They are of especial interest as the oldest of the known sedimentary deposits,

and occur in the form of low, rounded, ice-worn hills, "which have endured the battles and the storms of time longer than any other mountains." Dr. Dawson has made these highly crystalline rocks his special study, and has discovered the few traces of animal life therein, his most noteworthy addition being that famous "dawn animal," *Eozoon canadense*, whose claims to animal organization are still the subject of such keen debate.

The aim of the present volume, which is profusely illustrated with a series of well-executed woodcuts, many of which are from original sources, is to place (to quote his own prefatorial words) before those who are not specialists in like matters "such a view of the ascertained sequence of the forms of life as may serve at once to give exalted and elevated views of the great plan of creation, and to prevent the deceptions of pseudo-scientists from doing their evil work." The plan adopted is to note the first known appearance of each leading type of life, and to follow its progress throughout all the ages up to the present time.

After a few preliminary observations as to the extent and sources of our exact knowledge with regard to the beginning of life on the earth, and references

* "The Chain of Life in Geological Time." By J. W. Dawson, LL.D., F.R.S. 8vo. With numerous woodcuts. The Religious Tract Society.

to the various estimates as to the probable duration of geological time, the author makes the frank admission that science can tell us nothing as to how the first organism, whether plant or animal, or partaking of the nature of both, first came into being. Assuming that life was necessarily non-existent on the face of the earth during the most intense glowing and vaporous conditions of its earliest existence, he concludes that, in the first instance, there must have been "an absolute creation or origination of life and organization." Plants, he finds reason to believe, preceded animals, and our knowledge of the succession of life as revealed in the records of the rocks leads up to the conviction that the first creatures were of low and humble organization, suited to the then immature and unfinished condition of our planet. At that period, however, its physical condition was not favorable to the preservation of their remains in a determinable state.

Thus it is that the life records of the Eozoic period are so imperfect, for it is considered probable from the fact that great stores of carbon and of lime available for the use of such simple animals as were constituted to flourish under such conditions occur in the Eozoic rocks, that animal life was in reality more abundant during those ages than the scanty fossil traces of it would lead us to suppose. Here the famous *Eozoon canadense* appears upon the scene, and its claims to be considered an animal are strongly insisted upon by its sponsor and discoverer. For Dr. Dawson has always maintained that this singular structure is the fossilized skeleton of masses of one of the lowest forms of life, the Foraminifera, or pore-bearing animals. In tracing this simple form of primeval life through the successive geological periods, Dr. Dawson finds its relatives or descendants up to the present time, but is not able to adduce any evidence with regard to the development of higher forms of animal life from *Eozoon*, because "he knows nothing of it." He notes, however, that "it has never perished, but has always found abundant place for itself, however pressed by physical changes, and by the introduction of higher beings."

Passing on to the "age of the inverte-

brates of the sea," the now comparatively rich Cambrian and Silurian fauna, the seaweeds, sponges, worms, moss animals, crustaceans, and mollusks, which exclusively populated the waters during the earlier Palæozoic period, is described, and the close affinity which many of them present to allied species in the existing seas clearly detailed. Thus the earliest known sponge (*Protospongia fenestrata*, Salter), from the Cambrian is shown to possess the same perfect type of skeletal development as the Lattice sponges of our own times. These primeval sponges, it is further insisted, betray no relationship with the Foraminifera below or the corals above them in zoological gradation. Coming next to the Mollusca, we find the views of Mr. Davidson on the Brachiopoda,* and those of M. Barrande† on the Cephalopoda, with which our readers are already familiar, extensively quoted, and the conclusions to be derived from the study of the chain of life in the ancient life period are thus summarized:

"The Palæozoic age of geology is thus emphatically an age of invertebrates of the sea. In this period they were dominant in the waters, and, until toward its close, almost without rivals. We shall find, however, that in the Upper Silurian fishes made their appearance, and in the Carboniferous amphibian reptiles, and that, before the close of the Palæozoic, vertebrate life in these forms had become predominant. We shall also see that, just as the leading groups of Mollusks and Crustaceans seem to have had no ancestors, so it is with the groups of Vertebrates which take their places. It is also interesting to observe that already in the Palæozoic all the types of invertebrate marine life were as fully represented as at present, and that this swarming marine life breaks upon us in successive waves as we proceed upward from the Cambrian. Thus the progress of life is not gradual, but intermittent, and consists in the sudden and rapid influx of new forms destined to increase and multiply in the place of those which are becoming effete and ready to vanish away or to sink to a

* See "Leisure Hour," 1877, p. 613.

† Ibid., 1878, p. 149.

lower place. Further, since the great waves of aquatic life roll in with each great subsidence of the land, a fact which coincides with their appearance in the limestones of the successive periods, it follows that it is not struggle for existence, but expansion under favorable circumstances and the opening up of new fields of migration that is favorable to the introduction of new species. The testimony of palæontology on this point in my judgment altogether subverts the prevalent theory of 'survival of the fittest,' and shows that the struggle for existence, so far from being a cause of development and improvement, has led only to decay and extinction, whereas the advent of new and favorable conditions, and the removal of severe competition, are the circumstances favorable to introduction of new and advanced species."

In treating of the "origin of plant life on the land," the author premises, and on this point he speaks with the voice of recognized authority, that no direct evidence in the form of organized plant remains from the Eozoic rocks is forthcoming, although the quantity of carbon in the graphitic zone of the Laurentian series can only be compared with that of certain productive coal-fields, and suggests a vegetable derivation. In the Cambrian seaweeds abounded, but the first known semi-land plant is the *Protannularia Harknessii*, Nicholson, which lived in Cambrian times, when the Skiddaw slates were deposited, and is believed to be distantly allied to the mares'-tails of our swamps. Subsequent discoveries prove the existence in the Lower Silurian period of members of the three leading families of the inferior division of flowerless plants, some of the highest types of which—the club-mosses, mares'-tails, and ferns—have therefore existed almost from the beginning. But it is in the Devonian, a partially lacustrine formation, that the earliest and most complete land flora is preserved. The forms of flowing plants then covering the earth were greatly increased during the moist and warm climate of the ensuing Carboniferous epoch—one truly of luxuriant vegetation. But the Palæozoic flora was deficient in representatives of "nearly all that is characteristic of our modern

forests, whether in the ordinary Exogens, which predominate so greatly in the trees and shrubs of temperate climates, or in the palms and their allies which figure so conspicuously within the tropics. The few rare, and, to some extent, doubtful, representatives of these types scarcely deserve to be noted as exceptions. Had a botanist searched the Palæozoic forests for precursors of the future, he would probably have found only a few rare species, while he would have seen all around him the giant forms and peculiar and monotonous foliage of tribes now degraded in magnitude and structure, and of small account in the system of nature.

"It must not be supposed that the Palæozoic flora remained in undisturbed possession of the continents during the whole of that long period. In the successive subsidencies of the continental plateaux, in which the marine limestones were deposited, it was to a great extent swept away, or was restricted to limited insular areas, and these more especially in the far north, so that on re-elevation of the land it was always peopled with northern plants. Thus there were alternate restrictions and expansions of vegetation, and the latter were always signalized by the introduction of new species, for here, as elsewhere, it was not struggle, but opportunity, that favored improvement."

After this brief discussion on plant life, Dr. Dawson takes us back to the animal world, and relates the biography of the piscine race from the first appearance of the primeval and insignificant sharks and ganoids in late Silurian times to the culmination of the group in the Devonian, or "the reign of ganoids," when monsters of that ilk were the tyrants of the waters. He notes the incoming of the double-breathing reptilian type, of which the existing mudfish is the degenerated descendant, and the subsequent replacement of both ganoid and dipnoid races in the mediæval age of geological history by the modern types of bony fishes.

Another chapter gives us the history of the primeval air-breathers, in the forms of insects, may-flies, and crickets, occurring associated with the remains of Devonian plants, and of the subsequent rapid increase of types—the spiders,

land snails, and batrachian reptiles of the Carboniferous period—suctorial insects being first represented by the sphinx moth of the Solenhofen slates. The varied forms of snake-like piscine and crocodilian batrachians increased in number until their empire passed away on the appearance of the more elevated types.

"Nothing can be more remarkable than the apparently sudden and simultaneous incoming of the batrachian reptiles in the coal formation, as if, at a given signal, they came up like the frogs of Egypt, everywhere and in all varieties of form. If, as evolutionists suppose, they were developed from fishes, this must have been by some sudden change, occurring at once all over the world, unless, indeed, some great and unknown gap separates the Devonian from the Carboniferous—a supposition which seems quite contrary to fact—or unless in some region yet unexplored this change was proceeding, and at a particular time its products spread themselves over the world—a supposition equally improbable. In short, the hypothesis of evolution, as applied to these animals, is surrounded with geological improbabilities."

The ensuing interesting description of the discovery and working out of the remains of the primeval air-breathing reptiles from the decayed trunks of trees in the coal formation in Nova Scotia is, we regret, too lengthy for quotation.

The true reptiles form a strong link in the "chain of life." These were not, however, "fully enthroned till the Permian, an unsettled and disturbed age, characterized by great earth movements, had passed away, and until that period of continental elevation, with local deserts and desiccation, and much volcanic action, which we call the Trias, had also passed. Then, in the Jurassic and early Cretaceous the reptiles culminated and presented features of magnitude and structural complexity unrivalled in later times." The history of the great sea lizards, the beast-like reptiles (Theriodonts), and the flying saurians, is illustrated by numerous woodcuts. Among the most remarkable of these is that of the ponderous bipedal *Hadrosaurus*, as restored by Mr. Waterhouse Hawkins, a type to which we have now

good reason to believe the bulky *Iguanodon* of the Wealden also belonged. Figures of the birds with teeth, discovered by Marsh in the Cretaceous rocks of America, are also given as well as the usual restoration of that remarkable—almost quadrupedal—bird, *Archæopteryx*, which is so unlike all other members of its class that one great authority on birds refuses its admission into the avian ranks. These apparently intermediate forms are thus dismissed by our author:

"In the later Mesozoic, indeed, some reptiles became so bird-like that they nearly approach the earliest birds; but this was a final and futile effort of the reptile to obtain in the air that supremacy which it had long enjoyed in earth and water; and its failure was immediately succeeded in the Eocene by the appearance of a cloud of true birds representing all the existing orders."

"So far as yet known, the reign of reptiles was world-wide in its time; and the imagination is taxed to conceive of a state of things in which the seas swarmed with great reptiles on every coast, when the land was trodden by colossal reptilian bipeds and quadrupeds, in comparison with some of which our elephants are pigmies, and when the air was filled with the grotesque and formidable *Pterodactyls*. Yet this is no fancy picture. It represents a time which actually existed, when that comparatively low, brutal, and insensate type of existence represented by the modern crocodiles and alligators was supreme in the world. The duration of these creatures was long, and in watching the progress of creation, they would have seemed the permanent inhabitants of the earth. Yet all have perished, and their modern successors, except a few large species existing in the warmer climates, have become subject to the more recently introduced mammalia.

"How did the ancient reptile aristocracy perish? We are ignorant of the details of the catastrophe, but their final disappearance and replacement by the more modern fauna was connected with a great continental subsidence in the Cretaceous age, and with changes of climate and conditions preceding and subsequent to it. Yet the struggle for

continued dominion was hard and protracted, and toward its close some of the champions of the reign of reptiles were the greatest and most magnificent examples of the type, as if they had risen in their might to defy approaching ruin. Thus some of the most stupendous forms appear in the later Cretaceous, after the great subsidence had made progress and almost attained its consummation."

Returning to the plant world, Dr. Dawson gives a brief history of the appearance of vegetation allied to that now existing, which came in with its full force in the latter days of the Cretaceous epoch before the expiration of the reign of the reptiles. "Thus the plant takes precedence of the animal, and the preparation was made for the mammalian life of the Eocene by the introduction of the modern flora in the Cretaceous period." The forests first covered the land that bordered the chalk ocean. At that period the vegetation of Eastern Europe resembled that now characteristic of China or South America. The uppermost chalk of Maestricht is crowded with remains of plants of comparatively recent type, and in the Eocene great forests of oaks, chestnuts, laurels, giant pines, and other genera, some of them still European, others now Asiatic or American, and many of them survivors of the Cretaceous, flourished on the land until the exuberance of plant life was finally checked on our continents by the great ice age.

Another chapter is devoted to the evidence favorable and unfavorable to the theories of the evolution of the mammalia. The incoming in the Trias of the inferior marsupial order, now exclusively restricted to the Australian and North American continents, but once so numerous distributed over the European area, is related with the subsequent appearance in early Tertiary times of the superior herbivorous and carnivorous orders. Thus we are led up to the latter days of the earth's history, when the sabre-toothed tiger, the mammoth, and the cave lion were the contemporaries and the foes of primeval man, whose advent on the earth is proclaimed by the presence of the rude weapons he used, and his subsequent steps on the path of progress by relics of his pottery, his dwellings, and a few records of the simple arts he practised.

The advent of man forges the last link in the chain of life throughout the ages. Dr. Dawson assigns a much shorter period for the existence of the human race than is usual with scientific writers, and his ingenious arguments on this point, as well as his views regarding the origin and history of life on the earth, readers who are interested in such matters had better consider for themselves. We may add that his little volume covers wide ground, and teems with facts and conclusions, many of which, original and forcible, merit further consideration than our space permits.—*The Leisure Hour*.

RAMBLES AMONG BOOKS.

N^O. I.

COUNTRY BOOKS.

A LOVE of the country is taken, I know not why, to indicate the presence of all the cardinal virtues. It is one of those outlying qualities which are not exactly meritorious, but which, for that very reason, are the more provocative of a pleasing self-complacency. People pride themselves upon it as upon habits of early rising, or of answering letters by return of post. We recognize the virtuous hero of a novel as soon as we are told that the cat instinctively creeps to

his knee, and that the little child clutches his hand to stay its tottering step. To say that we love the country is to make an indirect claim to a similar excellence. We assert a taste for sweet and innocent pleasures, and an indifference to the feverish excitements of artificial society. I, too, love the country—if such a statement can be received after such an exordium; but I confess—to be duly modest—that I love it best in books. In real life I have remarked that it is frequently damp and rheumatic, and most hated by those who know it best. Not long ago I heard a

worthy orator at a country school-treat declare to his small audience that honesty, sobriety, and industry, in their station in life, might possibly enable them to become cab-drivers in London. The precise form of the reward was suggested, I fancy, by some edifying history of an ideal cabman; but the speaker clearly knew the road to his hearers' hearts. Perhaps the realization of this high destiny might dispel their illusions. Like poor Susan at the corner of Wood Street, they would see

Bright volumes of vapor through Lothbury
glide,
And a river flow on through the vale of Cheap-
side.

The Swiss, who at home regards a mountain as an unmitigated nuisance, is (or once was) capable of developing sentimental yearnings for the Alps at the sound of a *rang des vaches*. We all agree with Horace that Rome is most attractive at Tibur, and *vice versa*. It is the man who has been "long in populous cities pent" who, according to Milton, enjoys

The smell of grain or tedded grass or kine,
Or daisy, each rural sight, each rural sound;

and the phrase is employed to illustrate the sentiments of a being whose enjoyment of paradise was certainly enhanced by a sufficiently contrasted experience.

I do not wish to pursue the good old moral saws expounded by so many preachers and poets. I am only suggesting a possible ground of apology for one who prefers the ideal mode of rustication; who can share the worthy Johnson's love of Charing Cross, and sympathize with his pathetic remark when enticed into the highlands by his bear-leader that it is easy "to sit at home and conceive rocks, heaths, and waterfalls." Some slight basis of experience must doubtless be provided on which to rear any imaginary fabric; and the mental opiate, which stimulates the sweetest reverie, is found in chewing the cud of past recollections. But with a good guide, one requires small external aid. Though a cockney in grain, I love to lean upon the farm-yard gate; to hear Mrs. Poyser give a bit of her mind to the squire; to be lulled into a placid doze by the humming of Dorlecote Mill; to sit down in Dandie Dinmont's parlor,

and bestow crumbs from his groaning table upon three generations of Peppers and Mustards; or to drop into the kitchen of a good old country inn and to smoke a pipe with Tom Jones or listen to the simple-minded philosophy of Parson Adams. When I lift my eyes to realities, I can dimly descry across the street a vision of my neighbor behind his looking-glass adjusting the parting of his back hair, and achieving triumphs with his white tie calculated to excite the envy of a Brummell. It is pleasant to take down one of the magicians of the shelf, to annihilate my neighbor and his evening parties, and to wander off through quiet country lanes into some sleepy hollow of the past.

Who are the most potent weavers of that delightful magic? Clearly, in the first place, those who have been themselves in contact with rural sights and sounds. The echo of an echo loses all sharpness of definition; our guide may save us the trouble of stumbling through farm-yards and across ploughed fields, but he must have gone through it himself till his very voice has a twang of the true country accent. Milton, as Mr. Pattison has lately told us, "saw nature through books," and is therefore no trustworthy guide. We feel that he has got a Theocritus in his pocket; that he is using the country to refresh his memories of Spenser, or Chaucer, or Virgil; and, instead of forgetting the existence of books in his company, we shall be painfully abashed if we miss some obvious allusion or fail to identify the passages upon which he has moulded his own descriptions. And, indeed, to put it broadly, the poets are hardly to be trusted in this matter, however fresh and spontaneous may be their song. They don't want to offer us a formal sermon unless "they" means Wordsworth; but they have not the less got their little moral to insinuate. Shelley's skylark and Keats's nightingale are equally determined that we shall indulge in meditations about life and death and the mysterious meaning of the universe. That is just what, on these occasions, we want to forget; we want the bird's song, not the emotions which it excites in our abnormally sensitive natures. I can never read without fresh admiration Mr. Arnold's "Gypsy Scholar," but in

this sense that delightful person is a typical offender. I put myself, at Mr. Arnold's request, in the corner of the high half-reaped field; I see the poppies peeping through the green roots and yellowing stems of the corn; I lazily watch the scholar,* with "his hat of antique shape," roaming the country side, and becoming the living centre of one bit of true old-fashioned rustic scenery after another; and I feel myself half persuaded to be a gypsy. But then, before I know how or why, I find that I am to be worrying myself about the strange disease of modern life; about "our brains o'ertaxed and palsied hearts," and so forth; and instead of being lulled into a delicious dream, I have somehow been entrapped into a meditation upon my incapacity for dreaming. And, more or less, this is the fashion of all poets. You can never be sure that they will let you have your dream out quietly. They must always be bothering you about the state of their souls; and, to say the truth, when they try to be simply descriptive, they are for the most part intolerably dull.

Your poet, of course, is bound to be an interpreter of nature; and nature, for the present purpose, must be regarded as simply a nuisance. The poet, by his own account, is condescending to find words for the inarticulate voices of sea and sky and mountain. In reality, nature is nothing but the sounding-board which is to give effect to his own valuable observations. It is a general, but safe rule that whenever you come across the phrase "laws of nature" in an article—especially if it is by a profound philosopher—you may expect a sophistry; and it is still more certain that when you come across nature in a poem you should prepare to receive a sermon. It does not in the least follow that it will be a bad one. It may be exquisite, graceful, edifying, and sublime; but, as a sermon, the more effective the less favorable to the reverie which one desires to cultivate. Nor, be it observed, does it matter whether the prophet be more or less openly and unblushingly didactic. A good many hard things have been said about poor Wordsworth for his delight in sermonizing; and though I love Wordsworth with all my heart, I certainly cannot

deny that he is capable of becoming a portentous weariness to the flesh. But, for this purpose, Wordsworth is no better and no worse than Byron or Shelley, or Keats or Rousseau, or any of the dealers in praises of "Weltschmerz," or mental dyspepsia. Mr. Ruskin has lately told us that in his opinion ninety-nine things out of a hundred are not what they should be, but the very opposite of what they should be. And therefore he sympathizes less with Wordsworth than with Byron and Rousseau, and other distinguished representatives of the same agreeable creed. From the present point of view the question is irrelevant. I wish to be for the nonce a poet of nature, not a philosopher, either with a healthy or a disturbed liver, delivering a judicial opinion about nature as a whole or declaring whether I regard it as representing a satisfactory or a thoroughly uncomfortable system. I condemn neither opinion; I will not pronounce Wordsworth's complacency to be simply the glow thrown from his comfortable domestic hearth upon the outside darkness; or Byron's wrath against mankind to be simply the crying of a spoiled child with a digestion ruined by sweetmeats. I do not want to think about it. Preaching, good or bad, from the angelic or diabolical point of view, cunningly hidden away in delicate artistic forms, or dashed ostentatiously in one's face in a shower of moral platitudes, is equally out of place. And, therefore, for the time, I would choose for my guide to the Alps some gentle enthusiast in "Peaks and Passes," who tells me in his admirably matter-of-fact spirit what he had for lunch and how many steps he had to cut in the *mur de la cote*, and catalogues the mountains which he could see as calmly as if he were repeating a schoolboy lesson in geography. I eschew the meditations of Obermann, and do not care in the least whether he got into a more or less maudlin frame of mind about things in general as contemplated from the Col de Janan. I shrink even from the admirable descriptions of Alpine scenery in the "Modern Painters," lest I should be launched unawares into ethical or æsthetical speculation. "A plague of both your houses!" I wish to court entire absence of thought—not even to talk to a

graceful gypsy scholar, troubled with aspirations for mysterious knowledge ; but rather to the genuine article, such as the excellent Bamfield Moore Carew, who took to be a gypsy in earnest, and was content to be a thorough loafer, not even a Bohemian in conscious revolt against society, but simply outside of the whole social framework, and accepting his position with as little reflection as some wild animal in a congenial country.

Some kind philosopher professes to put my thoughts into correct phraseology by saying that for such a purpose I require thoroughly "objective" treatment. I must, however, reject his suggestions, not only because "objective" and "subjective" are vile phrases, used for the most part to cover indolence and ambiguity of thought, but also because, if I understand the word rightly, it describes what I do not desire. The only thoroughly objective works with which I am acquainted are those of which Bradshaw's Railway Guide is an accepted type. There are occasions, I will admit, in which such literature is the best help to the imagination. When I read in prosaic black and white that by leaving Euston Square at 10 A.M. I shall reach Windermere at 5.40 P.M., it sometimes helps me to perform an imaginary journey to the lakes even better than a study of Wordsworth's poems. It seems to give a fixed point round which old fancies and memories can crystallize ; to supply a useful guarantee that Grasmere and Rydal do in sober earnest belong to the world of realities, and are not mere parts of the decaying phantasmagoria of memory. And I was much pleased the other day to find a complimentary reference in a contemporary essayist to a lively work called, I believe, the "Shepherd's Guide," which once beguiled a leisure hour in a lonely inn, and which simply records the distinctive marks put upon the sheep of the district. The sheep, as it proved, was not a mere poetical figment in an idyll, but a real tangible animal, with wool capable of being tarred and ruddled, and eating real grass in real fells and accessible mountain dales. In our childhood, when any old broomstick will serve as well as the wondrous horse of brass

[On which the Tartar king did ride,

in the days when a cylinder with four pegs is as good a steed as the finest animal in the Elgin marbles, and when a puddle swarming with tadpoles or a streamlet haunted by water-rats is as full of romance as a jungle full of tigers, the barest catalogue of facts is the most effective. A child is deliciously excited by Robinson Crusoe because De Foe is content to give the naked scaffolding of direct narrative, and leaves his reader to supply the sentiment and romance at pleasure. Who does not fear, on returning to the books which delighted his childhood, that all the fairy-gold should have turned to dead leaves ? I remember a story told in some forgotten book of travels, which haunted my dreams, and still strikes me as terribly impressive. I see a traveller benighted by some accident in a nullah where a tiger has already supped upon his companion, and listening to mysterious sounds, as of fiendish laughter, which he is afterward cruel enough to explain away by some rationalizing theory as to gases. How or why the traveller got into or emerged from the scrape, I know not ; but some vague association of ferocious wild beasts and wood-demons in ghastly and haunted solitudes has ever since been excited in me by the mention of a nullah. It is as redolent of awful mysteries as the chasm in "Kubla Khan." And it is painful to reflect that a nullah may be a commonplace phenomenon in real life ; and that the anecdote might possibly affect me no more, could I now read it for the first time, than one of the tremendous adventures recorded by Mr. Kingston or Captain Mayne Reid.

As we become less capable of supplying the magic for ourselves, we require it from our author. He must have the art—the less conscious the better—of placing us at his own point of view. He should, if possible, be something of a "humorist," in the old-fashioned sense of the word ; not the man who compounds oddities, but the man who is an oddity ; the slave, not the master, of his own eccentricities ; one absolutely unconscious that the strange twist in his mental vision is not shared by mankind, and capable, therefore, of presenting the fancies dictated by his idiosyncrasy as if they corresponded to obvious and gen-

erally recognized realities ; and of propounding some quaint and utterly preposterous theory, as though it were a plain deduction from undeniable truths. The modern humorist is the old humorist *plus* a consciousness of his own eccentricity, and the old humorist is the modern humorist *minus* that consciousness. The order of his ideas should not (as philosophers would have it) be identical with the order of things, but be determined by odd arbitrary freaks of purely personal association.

This is the kind of originality which we specially demand from an efficient guide to the country ; for the country means a region where men have not been ground into the monotony by the friction of our social mill. The secret of his charm lies in the clearness with which he brings before us some quaint, old-fashioned type of existence. He must know and care as little for what passes in the great world of cities and parliaments as the family of Tullivers and Dodsons. His horizon should be limited by the nearest country town, and his politics confined to the disputes between the parson and the dissenting minister. He should have thoroughly absorbed the characteristic prejudices of the little society in which he lives, till he is unaware that it could ever enter into any one's head to doubt their absolute truth. He should have a share of the peculiarity which is often so pathetic in children—the unhesitating conviction that some little family arrangement is a part of the eternal and immutable system of things, and be as much surprised at discovering an irreverent world outside as the child at the discovery that there are persons who do not consider his papa to be omniscient. That is the temper of mind which should characterize your genuine rustic. As a rule, of course, it condemns him to silence. He has no more reason for supposing that some quaint peculiarity of his little circle will be interesting to the outside world than a frog for imagining that a natural philosopher would be interested by the statement that he was once a tadpole. He takes it for granted that we have all been tadpoles. In the queer, outlying corners of the world where the father goes to bed and is nursed upon the birth of a child (a sys-

tem which has its attractive side to some persons of that persuasion), the singular custom is so much a matter of course that a village historian would not think of mentioning it. The man is only induced to exhibit his humor to the world when, by some happy piece of fortune, he has started a hobby not sufficiently appreciated by his neighbors. Then it may be that he becomes a prophet, and in his anxiety to recommend his own pet fancy, unconsciously illustrates also the interesting social stratum in which it sprung to life. The hobby, indeed, is too often unattractive. When a self-taught philosopher airs some pet crotchet, and proves, for example, that the legitimate descendants of the lost tribes are to be found among the Ojibbeways, he doubtless throws a singular light upon the intellectual peculiarities of his district. But he illustrates chiefly the melancholy truth that a half-taught philosopher may be as dry and as barren as the one who has been smoke-dried according to all the rules of art in the most learned academy of Europe.

There are a few familiar books in which a happy combination of circumstances has provided us with a true country idyll, fresh and racy from the soil, not consciously constructed by the most skilful artistic hand. Two of them have a kind of acknowledged pre-eminence in their own department. The man is not to be envied who has not in his boyhood fallen in love with Izaak Walton and White of Selborne. The boy, indeed, is happily untroubled as to the true source of the charm. He pores over the "Compleat Angler" with the impression that he will gain some hints for beguiling, if not the wily carp, who is accounted the water fox, at least the innocent roach, who "is accounted the water-sheep for his simplicity or foolishness." His mouth waters as he reads the directions for converting the pike—that compound, of mud and needles—into "a dish of meat too good for any but anglers or very honest men," a transformation which, if authentic, is little less than miraculous. He does not ask what is the secret of the charm of the book even for those to whom fishing is an abomination—a charm which induced even the arch-cockney Dr. Johnson, in spite of his famous definition of

angling, to prompt the republication of this angler's bible. It is only as he grows older, and has plodded through other sporting literature, that he can at all explain why the old gentleman's gossip is so fascinating. Walton, undoubtedly, is everywhere charming for his pure simple English, and the unostentatious vein of natural piety which everywhere lies just beneath the surface of his writing. Now and then, however, in reading the "Lives," we cannot quite avoid a sense that this excellent tradesman has just a touch of the unctuous about him. He is given—it is a fault from which hagiographers can scarcely be free—to using the rose-color a little too freely. He holds toward his heroes the relation of a sentimental churchwarden to a revered parish parson. We fancy that the eyes of the preacher would turn instinctively to Walton's seat when he wished to catch an admiring glance from an upturned face, and to assure himself that he was touching the "sacred fount of sympathetic tears." We imagine Walton lingering near the porch to submit a deferential compliment as to the "florid and seraphical" discourse to which he has been listening, and scarcely raising his glance above the clerical shoe-buckles. A portrait taken from this point of view is apt to be rather unsatisfactory. Yet, in describing the "sweet humility" of a George Herbert or of the saintly Mr. Farrer, the tone is at least in keeping, and is consistent even with an occasional gleam of humor, as in the account of poor Hooker, tending sheep and rocking the cradle under stringent feminine supremacy. It is less satisfactory when we ask Walton to throw some light upon the curiously enigmatic character of Donne, with its strange element of morbid gloom, and masculine passion, and subtle and intense intellect. Donne married the woman he loved in spite of her father and to the injury of his own fortunes. "His marriage," however, observes the biographer, "was the remarkable error of his life—an error which, though he had a wit able and very apt to maintain paradoxes, yet he was very far from justifying it." From our point of view, the only error was in the desire to justify an action of which he should have been proud. We must

make allowance for the difference in Walton's views of domestic authority; but we feel that his prejudice disqualifies him from fairly estimating a character of great intrinsic force. A portrait of Donne cannot be adequately brought within the lines accepted by the writer of orthodox and edifying tracts.

In spite of this little failing, this rather massive subservience to the respectabilities, the "Lives" form a delightful book; but we get the genuine Walton at full length in his "Angler." It was first published in dark days; when the biographer might be glad that his pious heroes had been taken from the sight of the coming evil; when the scattered survivors of his favorite school of divines and poets were turned out of their well-beloved colleges and parsonages, hiding in dark corners or plotting with the melancholy band of exiles in France and Holland; when Walton, instead of listening to the sound and witty discourses of Donne, would find the pulpit of his parish church profaned by some fanatical Puritan, expounding the Westminster Confession in place of the thirty-nine articles. The good Walton found consolation in the almost religious pursuit of his hobby. He fortified himself with the authority of such admirable and orthodox anglers as Sir Henry Wotton and Dr. Nowel, Dean of St. Paul's. Dr. Nowel had, "like an honest angler, made that good, plain, unperplexed Catechism which is printed with our good old service-book;" for an angler, it seems, is most likely to know that the road to heaven is not through "hard questions." The Dean died at the age of ninety-five, in perfect possession of his faculties; and "'tis said that angling and temperance were great causes of those blessings." Evidently Walton had somehow taken for granted that there is an inherent harmony between angling and true religion, which, of course, for him implies the Anglican religion. He does not trust himself in the evil times to grumble openly, or to indulge in more than an occasional oblique reference to the dealers in hard questions and metaphysical dogmatism. He takes his rod, leaves the populous city behind him, and makes a day's march to the banks of the quiet lea, where he can meet a like-minded friend or two; sit in the

sanded parlor of the country inn and listen to the milkmaid singing that "smooth song made by Kit Marlow, now at least fifty years ago," before English fields had been drenched with the blood of Roundheads and Cavaliers; or lie under a tree, watching his float till the shower had passed, and then calling to mind what "holy Mr. Herbert says of such days and flowers as these." Sweet day, so cool, so calm, so bright! but everybody has learned to share Walton's admiration, and the quotation would now be superfluous. It is nowhere so effective as with Walton's illustrations. We need not, indeed, remember the background of storm to enjoy the quiet sunshine and showers on the soft English landscape, which Walton painted so lovingly. The fact that he was living in the midst of a turmoil, in which the objects of his special idolatry had been so ruthlessly crushed and scattered, may help to explain the intense relish for the peaceful river-side life. His rod was the magic wand to interpose a soft idyllic mist between his eyes and such scenes as were visible at times from the windows of Whitehall. He loved his paradise the better because it was an escape from a pandemonium. But whatever the cause of his enthusiasm, its sincerity and intensity is the main cause of his attractiveness. Many poets of Walton's time loved the country as well as he; and showed it in some of the delicate lyrics which find an appropriate setting in his pages. But we have to infer their exquisite appreciation of country sights and sounds from such brief utterances, or from passing allusions in dramatic scenes. Nobody can doubt that Shakespeare loved daffodils, or a bank of wild thyme, or violets, as keenly as Wordsworth. When he happens to mention them, his voice trembles with fine emotion. But none of the poets of the time dared to make a passion for the country the main theme of their more pretentious song. They thought it necessary to idealize and transmute; to substitute an indefinite Arcadia for plain English fields, and to populate it with piping swains and nymphs, Corydons and Amorets and Phyllises. Poor Hodge or Cis were only allowed to appear when they were minded to indulge in a little broad comedy. The coarse rustics had to be washed and

combed before they could present themselves before an aristocratic audience; and plain English hills and rivers to be provided with tutelary gods and goddesses, fitted for the gorgeous pageantry of a country masque. Far be it from me—with the fear of æsthetic critics before my eyes—to say that very beautiful poems might not be produced under these conditions. It is proper, as I am aware, to admire Browne's, "Britannia's Pastorals," and to speak reverently of Fletcher's "Faithful Shepherdess," and Ben Jonson's "Sad Shepherd." I only venture to suggest here that such work is *caviare* to the multitude; that it requires a fine literary sense, a happy superiority to dull realistic suggestion, and a power of accepting the conventional conditions which the artist has to accept for his guidance. Possibly I may go so far as to hint without offence that the necessity of using this artificial apparatus was not in itself an advantage. A great master of harmony, with a mind overflowing with majestic imagery, might achieve such triumphs as "Comus" and "Lycidas," in which even the Arcadian pipe is made to utter the true organ-tones. We forgive any incongruities or artificialities when they are lost in such a blaze of poetry. The atmosphere of Arcadia was not as yet sickly enough to asphyxiate a Milton; but it was ceasing to be wholesome; and the weaker singers who imbibed it suffered under distinct attacks of drowsiness.

Walton's good sense, or his humility, or, perhaps, the simple ardor of his devotion to his hobby, encouraged him to deal in realities. He gave the genuine sentiment which his contemporaries would only give indirectly, transfigured and bedizened with due ornaments of classic or romantic pattern. There is just a faint touch of unreality, a barely perceptible flavor of the sentimental, about his personages; but only enough to give a permissible touch of pastoral idealism. Walton is painting directly from the life. The "honest alehouse," where he finds "a cleanly room, lavender in the windows, and twenty ballads stuck about the wall," was standing then on the banks of the Lea, as in quiet country nooks, here and there, occasional representatives of the true angler's rest are still to be found, not entirely

corrupted by the modern tourist. The good man is far too much in earnest to be aiming at literary ornament; he is a genuine simple-minded enthusiast, revealing his kindly nature by a thousand unconscious touches. The common objection is a misunderstanding. Everybody quotes the phrase about using the frog "as though you loved him;" and it is the more piquant as following one of his characteristically pious remarks. The frog's mouth, he tells, grows up for six months, and he lives for six months without eating, "sustained, none but He whose name is Wonderful knows how." He reverently admires the care taken of the frog by Providence, without drawing any more inference for his own conduct than if he were a modern physiologist. It is just this absolute unconsciousness which makes his love of the sport attractive. He has never looked at it from the frog's point of view. Your modern angler has to excuse himself by some scientific hypothesis as to feeling in the lower animals, and thereby betrays certain qualms of conscience which had not yet come to light in Walton's day. He is no more cruel than a schoolboy, "ere he grows to pity." He is simply discharging his functions as a part of nature, like the pike or the frog; and convinced, at the very bottom of his heart, that the angler represents the most eminent type of enjoyment, and should be the humble inheritor of the virtues of the fishers of Galilee. The gentlest and most pious thoughts come naturally into his mind while his worm is wriggling on his hook to entice the luckless trout. It is particularly pleasant to notice the quotations, which give a certain air of learning to his book. We see that the love of angling had become so ingrained in his mind as to direct his reading as well as to provide him with amusement. We fancy him poring on winter evenings over the pages of Aldrovandus and Gesner and Pliny and Topsell's histories of serpents and four-footed beasts, and humbly accepting the teaching of more learned men, who had recorded so many strange facts unobserved by the simple angler. He produces a couple of bishops, Dubravius and Thurso, as eye-witnesses, to testify to a marvellous anecdote of a frog jumping upon a pike's head

and tearing out his eyes, after "expressing malice or anger by swollen cheeks and staring eyes." Even Walton cannot forbear a quiet smile at this quaint narrative. But he is ready to believe, in all seriousness, that eels, "like some kinds of bees and wasps," are bred out of dew, and to confirm it by the parallel case of young goslings bred by the sun "from the rotten planks of an old ship and hatched up trees." Science was not a dry museum of hard facts, but a quaint storehouse of semi-mythical curiosities; and therefore excellently fitted to fill spare hours, when he could not meditatively indulge in "the contemplative man's recreation." Walton found some queer texts for his pious meditations, and his pursuit is not without its drawbacks. But his quaintness only adds a zest to our enjoyment of his book; and we are content to fall in with his humor, and to believe for the nonce that the love of a sport which so fascinates this simple, kindly, reverent nature, must be, as he takes for granted, the very crowning grace of a character moulded on the principles of sound Christian philosophy. Angling becomes synonymous with purity of mind and simplicity of character.

Mr. Lowell, in one of the most charming essays ever written about a garden, takes his text from White of Selborne, and admirably explains the charm of that worthy representative of the Waltonian spirit. "It is good for us now and then," says Mr. Lowell, "to converse in a world like Mr. White's, where man is the least important of animals;" to find one's whole world in a garden, beyond the reach of wars and rumors of wars. White does not give a thought to the little troubles which were disturbing the souls of Burke and George III. The "natural term of a hog's life has more interest for him than that of an empire;" he does not trouble his head about diplomatic complications while he is discovering that the odd tumbling of rooks in the air is caused by their turning over to scratch themselves with one claw. The great events of his life are his making acquaintance with a stilted plover, or his long—for it was protracted over ten years—and finally triumphant passion for "an old family tortoise." White of Selborne is clearly not the ideal

parson of George Herbert's time ; nor the parson of our own day—a poor atom whirled about in the distracting eddies of two or three conflicting movements. He is merely a good, kindly, domestic gentleman, on friendly terms with the squire and the gamekeeper, and ready for a chat with the rude forefathers of the hamlet. His horizon, natural and unnatural, is bounded by the soft round hills and the rich hangers of his beloved Hampshire country. There is something specially characteristic in his taste for scenery. Though "I have now travelled the Sussex Downs upward of thirty years," he says, "I still investigate that chain of majestic mountains with fresh admiration year by year ; and he calls "Mr. Ray" to witness that there is nothing finer in any part of Europe. "For my own part," he says, "I think there is somewhat peculiarly sweet and amusing in the shapely-figured aspects of chalk hills in preference to those of stone, which are rugged, broken, abrupt, and shapeless." I, for my part, agree with Mr. White—so long, at least, as I am reading his book. The downs have a singular charm in the exquisite play of long, gracefully undulating lines which bound their gentle edges. If not a "majestic range of mountains," as judged by an Alpine standard, there is no want of true sublimity in their springing curves, especially when harmonized by the lights and shadows under cloud-masses driving before a broad south-westerly gale ; and when you reach the edge of a great down, and suddenly look down into one of the little hollows where a village with a gray church tower and a grove of noble elms nestles amid the fold of the hills, you fancy that in such places of refuge there must still be relics of the quiet domesticities enjoyed by Gilbert White. Here, one fancies, it must be good to live ; to discharge, at an easy rate, all the demands of a society which is but a large family, and find ample excitement in studying the rambles of a tortoise, forming intimacies with moles, crickets, and field mice, and Pats, and brown owls, and watching the swifts and the night-jars wheeling round the old church tower, or hunting flies at the edge of the wood in the quiet summer evening.

In rambling through the lanes sacred to the memory of White, you may (in fancy, at least) meet another figure not at first sight quite in harmony with the clerical Mr. White. He is a stalwart, broad-chested man in the farmer's dress, even ostentatiously representing the old British yeoman brought up on beer and beef, and with a certain touch of pugnacity suggestive of the retired prize-fighter. He stops his horse to chat with a laborer breaking stones by the roadside, and informs the gaping rustic that wages are made bad and food dear by the diabolical machinations of the Tories, and the fundholders, and the boroughmongers, who are draining away all the fatness of the land to nourish the portentous "wen" called London. He leaves the man to meditate on this suggestion, and jogs off to the nearest country town, where he will meet the farmers at their ordinary, and deliver a ranting radical address. The squire or the parson who recognizes William Cobbett in this sturdy traveller will mutter a hearty abjuration, and wish that the disturber of rustic peace could make a closer acquaintance with the neighboring horse-pond. Possibly most readers who hear his name have vaguely set down Cobbett as one of the demagogues of the anti-reforming days, and remember little more than the fact that he dabbled in some rather questionable squabbles, and brought back Tom Paine's bones from America. But it is worth while to read Cobbett, and especially the "Rural Rides," not only to enjoy his fine homespun English, but to learn to know the man a little better. Whatever the deserts or demerits of Cobbett as a political agitator, the true man was fully as much allied to modern Young England and the later type of conservatism as to the modern radical. He hated the Scotch "feelosophers"—as he calls them—Parson Malthus, the political communists, the Manchester men, the men who would break up the old social system of the country, at the bottom of his heart ; and, whatever might be his superficial alliances, he loved the old quiet country life when Englishmen were burly, independent yeomen, each equal to three frog-eating Frenchmen. He remembered the relics of the system in the days of his youth ;

he thought that it had begun to decay at the time of the Reformation, when grasping landlords and unprincipled statesmen had stolen church property on pretence of religion ; but ever since, the growth of manufactures, and corruption, and stock-jobbing had been unpopulating the country to swell the towns, and broken up the old, wholesome, friendly English life. That is the text on which he is always dilating with genuine enthusiasm, and the belief, true or false, gives a pleasant flavor to his intense relish for true country scenery.

He looks at things, it is true, from the point of view of a farmer, not of a landscape-painter or a lover of the picturesque. He raves against that "accursed hill" Hindhead ; he swears that he will not go over it ; and he tells us very amusingly how, in spite of himself, he found himself on the very "tip top" of it, in a pelting rain, owing to an incompetent guide. But he loves the woodlands and the downs, and bursts into vivid enthusiasm at fine points of view. He is specially ecstatic in White's country. "On we trotted," he says, "up this pretty green lane, and, indeed, we had been coming gently and gradually up-hill for a good while. The lane was between high banks, and pretty high stuff growing on the banks, so that we could see no distance from us, and could receive not the smallest hint of what was so near at hand. The lane had a little turn toward the end, so that we came, all in a moment, at the very edge of a hanger ; and never in my life was I so surprised and delighted ! I pulled up my horse, and sat and looked. It was like looking from the top of a castle down into the sea, except that the valley was land and not water. I looked at my servant to see what effect this unexpected sight had upon him. His surprise was as great as mine, though he had been bred among the North Hampshire hills. Those who have so strenuously dwelt on the dirt and dangers of this road have said not a word about the beauties, the matchless beauties, of the scenery." And Cobbett goes on to describe the charms of the view over Selborne, and to fancy what it will be "when trees, and hangers, and hedges are in leaf, the corn waving, the mead-

ows bright, and the hops upon the poles," in language which is not after the modern style of word-painting, but excites a contagious enthusiasm by its freshness and sincerity. He is equally enthusiastic soon afterward at the sight of Avington Park and a lake swarming with wild fowl ; and complains of the folly of modern rapid travelling. "In any sort of carriage you cannot get into the *real country places*. To travel in stage-coaches is to be hurried along by force in a box with an air-hole in it, and constantly exposed to broken limbs, the danger being much greater than that of shipboard, and the noise much more disagreeable, while the company is frequently not a great deal more to one's liking." What would Cobbett have said to a railway ? And what has become of the old farm-house on the banks of the Mole, once the home of "plain manners and plentiful living," with "oak clothes-chests, oak bedsteads, oak chests of drawers, and oak tables to eat on, long, strong, and well supplied with joint stools ?" Now, he sighs, there is a "*parlor* ! aye, and a *carpet* and *bell-pull* too ! and a mahogany table, and the fine chairs, and the fine glass, and all as barefaced upstart as any stock-jobber in the kingdom can boast of !" Probably the farm-house has followed the furniture, and, meanwhile, what has become of the fine old British hospitality when the farmer and his lads and lasses dined at one table, and a solid Englishman did not squeeze money out of his men's wages to surround himself with trumpery finery ?

To say the truth, Cobbett's fine flow of invective is a little too exuberant, and overlays too deeply the picturesque touches of scenery and the occasional bits of autobiography which recall his boyish experience of the old country life. It would be idle to inquire how far his vision of the old English country had any foundation in fact. Our hills and fields may be as lovely as ever ; and there is still ample room for the lovers of "nature" in Scotch moors and lochs, or even among the English fells, or among the storm-beaten cliffs of Devon and Cornwall. But nature, as I have said, is not the country. We are not in search of the scenery which appears now as it appeared in the re-

note days when painted savages managed to raise a granite block upon its supports for the amusement of future antiquarians. We want the country which bears the impress of some characteristic social growth; which has been moulded by its inhabitants as the inhabitants by it, till one is as much adapted to the other as the lichen to the rock on which it grows. How bleak and comfortless a really natural country may be is apparent to the readers of Thoreau. He had all the will to become a part of nature, and to shake himself free from the various trammels of civilized life, and he had no small share of the necessary qualifications; but one cannot read his account of his life by Walden pond without a shivering sense of discomfort. He is not really acclimatized; so far from being a true child of nature, he is a man of theories, a product of the social state against which he tries to revolt. He does not so much relish the wilderness as to go out into the wilderness in order to rebuke his contemporaries. There is something harsh about him and his surroundings, and he affords an unconscious proof that something more is necessary for the civilized man who would become a true man of the woods than simply to strip off his clothes. He has got tolerably free from tailors; but he still lives in the intellectual atmosphere of Cambridge debating-rooms.

To find a life really in harmony with a rustic environment we must not go to raw settlements where man is still fighting with the outside world, but to some region where a reconciliation has been worked out by an experience of centuries. And amid all the restlessness of modern improvers we may still find a few regions where the old genius has not been quite exorcised. Here and there, in country lanes, and on the edge of uninclosed commons, we may still meet the gypsy—the type of a race adapted to live in the interstices of civilization, having something of the indefinable grace of all wild animals, and yet free from the absolute savagery of the genuine wilderness. To mention gypsies is to think of Mr. Borrow; and I always wonder that the author of the "Bible in Spain" and "Lavengro" is not more popular. Certainly I have found

no more delightful guide to the charming nooks and corners of rural England. I would give a good deal to identify that remarkable dingle in which he met so singular a collection of characters. Does it really exist, I wonder, anywhere on this island? or did it ever exist? and, if so, has it become a railway-station, and what has become of Isopel Berners and "Blazing Bosville, the flaming Tinman?" His very name is as good as a poem, and the battle in which Mr. Borrow floored the Tinman by that happy left-handed blow is, to my mind, more delightful than the fight in "Tom Brown," or that in which Dobbin acted as the champion of Osborne. Mr. Borrow is a "humorist" of the first water. He lives in a world of his own—a queer world with laws peculiar to itself, and yet one which has all manner of odd and unexpected points of contact with the prosaic world of daily experience. Mr. Borrow's Bohemianism is no revolt against the established order. He does not invoke nature or fly to the hedges because society is corrupt or the world unsatisfying, or because he has some kind of new patent theory of life to work out. He cares nothing for such fancies. On the contrary, he is a staunch conservative, full of good old-fashioned prejudices. He seems to be a case of the strange reappearance of an ancestral instinct under altered circumstances. Some of his forefathers must have been gypsies by temperament if not by race; and the impulses due to that strain have got themselves blended with the characteristics of the average Englishman. The result is a strange and yet, in a way, harmonious and original type, which made the "Bible in Spain," a puzzle to the average reader. The name suggested a work of the edifying class. Here was a good respectable emissary of the Bible Society going to convert four papists by a distribution of the Scriptures. He has returned to write a long tract setting forth the difficulties of his enterprise, and the stiff-neckedness of the Spanish people. The luckless reader who took up the book on that understanding was destined to a strange disappointment. True, Mr. Borrow appeared to take his enterprise quite seriously, indulges in the proper reflections, and gets into the

regulation difficulty involving an appeal to the British minister. But it soon appears that his Protestant zeal is somehow mixed up with a passion for strange wanderings in the queerest of company. To him Spain is not the land of staunch Catholicism, or of Cervantes, or of Velasquez, and still less a country of historic or political interest. Its attraction is in the picturesque outcasts who find ample roaming-ground in its wilder regions. He regards them, it is true, as occasional subjects for a little proselytism. He tells us how he once delivered a moving address to the gypsies in their own language to his most promising congregation. When he had finished, he looked up and found himself the centre of all eyes, each pair contorted by a hideous squint, rivalling each other in frightfulness; and the performance, which he seems to have thoroughly appreciated, pretty well expressed the gypsy view of his missionary enterprise. But they delighted to welcome him in his other character as one of themselves, and yet as dropping among them from the hostile world outside. And, certainly, no one not thoroughly at home with gypsy ways, gypsy modes of thought, to whom it comes quite naturally to put up in a den of cut-throats, or to enter the field of his missionary enterprise in company with a professional brigand travelling on business, could have given us so singular a glimpse of the most picturesque elements of a strange country. Your respectable compiler of handbooks might travel for years in the same districts all unconscious that passing vagabonds were so fertile in romance. The freemasonry which exists among the class lying outside the pale of respectability enables Mr. Borrow to fall in with adventures full of mysterious fascination. He passes through forests at night, and his horse suddenly stops and trembles, while he hears heavy footsteps and rustling branches, and some heavy body is apparently dragged across the road by panting but invisible bearers. He enters a shadowy pass, and is met by a man with a face streaming with blood, who implores him not to go forward into the hands of a band of robbers; and Mr. Borrow is too sleepy and indifferent to stop, and jogs on in safety without meeting the knife which he half

expected. "It was not so written," he says, with the genuine fatalism of your hand-to-mouth Bohemian. He crosses a wild moor with a half-witted guide, who suddenly deserts him at a little tavern. After a wild gallop on a pony, apparently half-witted also, he at last rejoins the guide resting by a fountain. This gentleman condescends to explain that he is in the habit of bolting after a couple of glasses, and never stops till he comes to running water. The congenial pair lose themselves at nightfall, and the guide observes that if they should meet the *Estadéa*, which are spirits of the dead riding with candles in their hands—a phenomenon happily rare in this region—he shall "run and run till he drowns himself in the sea, somewhere near Muros." The *Estadéa* do not appear, but Mr. Borrow and his guide come near being hanged as Don Carlos and a nephew, escaping only by the help of a sailor who knows the English words knife and fork, and can therefore testify to Mr. Borrow's nationality; and is finally liberated by an official who is a devoted student of Jeremy Bentham. The queer stumbling upon a name redolent of every-day British life throws the surrounding oddity into quaint relief. But Mr. Borrow encounters more mysterious characters. There is the wondrous Abarbenelt, whom he meets riding by night, and with whom he soon becomes hand and glove. Abarbenelt is a huge figure in a broad-brimmed hat, who stares at him in the moonlight with deep calm eyes, and still revisits him in dreams. He has two wives and a hidden treasure of old coins, and when the gates of his house are locked, and the big dogs loose in the court, he dines off ancient plate made before the discovery of America. There are many of his race among the priesthood, and even an archbishop, who died in great renown for sanctity, had come by night to kiss his father's hand. Nor can any reader forget the singular history of Benedict Mol, the wandering Swiss, who turns up now and then in the course of his search for the hidden treasure at Compostella. Men who live in strange company learn the advantage of not asking questions, or following out delicate inquiries; and these singular figures are the more attractive be-

cause they come and go, half revealing themselves for a moment, and then vanishing into outside mystery, as the narrator himself sometimes merges into the regions of absolute commonplace, and then dives down below the surface into the remotest recesses of the social labyrinth.

In Spain there may be room for such wild adventures. In the trim, orderly, English country we might fancy they had gone out with the fairies. And yet Mr. Borrow meets a decayed pedler in Spain who seems to echo his own sentiments; and tells him that even the most prosperous of his tribe who have made their fortunes in America return in their dreams to the green English lanes and farm-yards. "There they are with their boxes on the ground displaying their goods to the honest rustics and their dames and their daughters, and selling away and chaffering and laughing just as of old. And there they are again at nightfall in the hedge alehouses, eating their toasted cheese and their bread, and drinking the Suffolk ale, and listening to the roaring song and merry jests of the laborers." It is the old picturesque country life which fascinates Mr. Borrow, and he was fortunate enough to plunge into the heart of it before it had been frightened away by the railways. "Lavengro" is a strange medley, which is nevertheless charming by reason of the odd idiosyncrasy which fits the author to interpret this fast vanishing phase of life. It contains queer controversial irrelevance—conversations or stories which may or may not be more or less founded on fact, tending to illustrate the pernicious propaganda of Popery, the evil done by Sir Walter Scott's novels, and the melancholy results of the decline of pugilism. And then we have satire of a simple kind upon literary craftsmen, and excursions into philology which show at least an amusing dash of innocent vanity. But the oddity of these quaint utterances of a humorist who seeks to find the most congenial mental food in the Bible, the Newgate Calendar, and in old Welsh literature, is in thorough keeping with the situation. He is the genuine tramp whose experience is naturally made up of miscellaneous waifs and strays; who drifts into contact with

the most eccentric beings, and parts company with them at a moment's notice, or catching hold of some stray bit of out-of-the-way knowledge, follows it up as long as it amuses him. He is equally at home compounding narratives of the lives of eminent criminals for London booksellers, or making acquaintance with thimblerriggers, or pugilists, or Armenian merchants, or becoming a hermit in his remote dingle, making his own shoes and discussing theology with a postboy, a feminine tramp, and a Jesuit in disguise. The compound is too quaint for fiction, but is made interesting by the quaint vein of simplicity and the touch of genius which brings out the picturesque side of his roving existence, and yet leaves one in doubt how far the author appreciates his own singularity. One old gypsy lady in particular, who turns up at intervals, is as fascinating as Meg Merriles, and at once made life-like and more mysterious. "My name is Herne, and I comes of the hairy ones!" are the remarkable words by which she introduces herself. She bitterly regrets the intrusion of a Gentile into the secrets of the Romanies, and relieves her feelings by administering poison to the intruder, and then trying to poke out his eye as he is lying apparently in his last agonies. But she seems to be highly respected by her victim as well as by her own people, and to be acting in accordance with the moral teaching of her tribe. Her design is frustrated by the appearance of a Welsh Methodist preacher, who, like every other strange being, is at once compelled to unbosom himself to this odd confessor. He fancies himself to have committed the unpardonable sin at the age of six, and is at once comforted by Mr. Borrow's sensible observation that he should not care if he had done the same thing twenty times over at the same period. The grateful preacher induces his consoler to accompany him to the borders of Wales; but there Mr. Borrow suddenly stops on the ground that he should prefer to enter Wales in a suit of superfine black, mounted on a powerful steed like that which bore Greduv to the fight of Catrath, and to be welcomed at a dinner of the bards, as the translator of the odes of the great Ab Gwilym. And Mr. Petulengro op-

portunately turns up at the instant, and Mr. Borrow rides back with him, and hears that Mrs. Herne has hanged herself, and celebrates the meeting by a fight without gloves, but in pure friendliness, and then settles down to the life of a blacksmith in his secluded dingle.

Certainly it is a queer topsy-turvy world to which we are introduced in "Lavengro." It gives the reader the sensation of a strange dream in which all the miscellaneous population of caravans and wayside tents make their exits and entrances at random, mixed with such eccentrics as the distinguished author, who has a mysterious propensity for touching odd objects as a charm against evil. All one's ideas are dislocated when the centre of interest is no longer in the thick of the crowd, but in that curious limbo whither drift all the odd personages who live in the interstices without being caught by the meshes of the great network of ordinary convention. Perhaps the oddity repels many readers; but to me it always seems that Mr. Borrow's dingle represents a little oasis of genuine romance—a kind of half-visionary fragment of fairyland, which reveals itself like the enchanted castle in the vale of St. John, and then

vanishes after tantalizing and arousing one's curiosity. It will never be again discovered by any flesh-and-blood traveller; but in my imaginary travels I like to rusticate there for a time, and to feel as if the gypsy was the true possessor of the secret of life, and we who travel by rail and read newspapers and consider ourselves to be sensible men of business, were but vexatious intruders upon this sweet dream. There must, one supposes, be a history of England from the Petulengro point of view, in which the change of dynasties recognized by Hume and Mr. Freeman; or the oscillations of power between Lord Beaconsfield and Mr. Gladstone, appear in relative insignificance as more or less affecting certain police regulations and the inclosure of commons. It is pleasant for a time to feel as though the little rivulet were the main stream, and the social outcast the true centre of society. The pure flavor of the country life is only perceptible when one has annihilated all disturbing influences; and in that little dingle with its solitary forge beneath the woods haunted by the hairy Hernes, that desirable result may be achieved for a time, even in a London library.—*Cornhill Magazine*.

TWICE SHIPWRECKED.

A NARRATIVE OF THE LOSS OF THE AMERICAN AND STRIKING OF THE SENEGAL.

BY A LADY PASSENGER.

THERE are few words which present such a picture of horror and hopelessness as *shipwreck*; and I, who have suffered it twice in one voyage within the space of a few weeks, have no intention of making light of the calamity. But I should like people to know that it is possible for delicate women and children to go through danger, deprivation, and distress, and yet retain health and strength radically unimpaired. It is a subject which has a peculiar importance for me; for I think if I had ever heard such a tale my spirit would not so have sunk in the first night of peril. I thought then only about the horrors I had heard and read of—the terrible sufferings which it seemed people were

bound to undergo: thirst, hunger, madness, disease, death. It is not unpleasant to have one's hair standing on end when comfortably ensconced in an arm-chair by the fire; but it is a very different thing when we find ourselves actually amid the terrors we read of, acting in, instead of merely imagining them. It is for this reason that I should like our story to be widely known, that it might be recalled in the hour of danger, and hearts cheered and comforted by the reflection, "See what the twice-shipwrecked passengers suffered, and yet they lived to tell the tale."

I set sail April the 7th, 1880, in the ill-fated American, with my husband, child, and nurse. I had already twice

before made the journey to and from the Cape, and, in spite of sea-sickness, generally managed to have a pleasant time. We experienced very rough weather in the Bay of Biscay; but after three or four days it became calm, and I was well enough to take part in some theatricals which were being got up. We acted *Naval Engagements*, the captain and I sustaining two of the principal characters. The name of the piece was vividly recalled to me not long afterward.

The performance was a great success, and we amused ourselves in rehearsing another play which was fixed for some evenings later, but which never came off.

On the night of Thursday, the 22d, we had gone to bed as usual. My husband, little girl, and myself occupied one cabin. About five o'clock in the morning I suddenly found myself broad awake, and sitting up in bed, as if aroused by some shock, though I can remember hearing no noise. My husband, I discovered, had been affected in a similar manner, and then we became conscious of a loud whirring sound, precisely, I thought, like the donkey-engine engaged in setting sail. The same idea had occurred also to my husband, for he said, "Setting sail! I did not know we had a fair wind."

But as he spoke the vessel stopped.

My husband got up and went to inquire what was the matter. He came back and said it was all right, and we should soon go on again. A little while after, I heard the captain's voice calling for the chief steward. Then for the first time I experienced a sensation of alarm. The thought flashed through me, "What can he want with the chief steward but to provision the boats?"

My husband had gone again to make inquiries; and this time, when he returned, he told me to dress myself and the child—but only as a precautionary measure—there was no danger, no necessity for hurry. He said that the shaft had broken, which breaking was probably the shock that had roused us from sleep; but the whirring noise we had heard was of the engines "racing," as it is called—going round and round with no resistance.

I first called to my nurse to get up,

then quite calmly unfastened my box, deliberated for several minutes as to what dress it would be wisest to wear, and decided in favor of a cotton for the sake of coolness. Then, when I was quite ready, I carried my little girl into the nurse's cabin to be dressed.

The child rubbed her sleepy eyes and asked,

"Mamma, is it the acting?" for I had promised that on the next occasion she should stay up for the play, and her first thought was that I had come to fetch her to see us act. I answered steadily,

"Yes, darling, it's the acting."

I think one of my hardest tasks throughout was having to look into those innocent eyes and invent and lie so that she might suspect nothing wrong.

When we were all four dressed, I filled a small bag with my jewels; made into a bundle some things which I thought we might require most, and put some tins of Liebig's beef-tea into my husband's coat pockets. A happy thought this, for I really believe the beef-tea went far toward saving our lives. Then we went up on deck.

There was no excitement there; not the least symptom of confusion, though the boats were being made ready, and we all knew by this time that the ship was filling fast, and that in a very short time we should be compelled to leave her. We stood about in groups speaking very little, but it seemed to me that we all sought to avoid meeting each other's eyes, lest we should read there the confirmation of our worst fears.

Our captain set a noble example of calmness and self-possession. About seven o'clock he bade every one go below and partake of a cold breakfast that had been prepared. We obeyed the order, but it was the merest pretext of eating; I could not swallow a mouthful of food, but I drank some tea gladly. It may seem a strange thing to have thought at such a moment, but what struck me most in regard to this meal was the coming in contact for the first time with the second-class passengers; not that I felt any foolish prejudice, but somehow it gave me a feeling as if nothing mattered henceforth—that this was the breaking-up of everything.

As soon as we came on deck again

the order was given to take to the boats. Still everything went on as smoothly as if we had been preparing for a party of pleasure. Still the captain repeated what he had told us at intervals all the time—that he had great hopes of saving the ship; that after the women and children were in the boats he meant to keep some of the men to work at the pumps, and that, perhaps, in a little while they would get the engines to work again, and we might all be able to return to the ship. I don't know if we believed him, but it was very pleasant to hear.

We kept close together, we four, for I had a great fear of being separated from my husband or child. While one of the ladies was being handed down into the first boat, I heard an officer say to her, "It's impossible, Mrs. —, for me to allow that bag to go. I would not deprive you of it if I could help it, but indeed it would not be right to let you take it."

No sooner did I hear this than I tore open my bundle, dragged out some handkerchiefs, and socks, and other things of which I thought we might have most urgent need; for I concluded it would be useless to attempt to take my large bundle if Mrs. — were not allowed her bag, which was much smaller. I learned afterward, however, that lady had already had three or four large packages passed into the boat. However, I relinquished the rest of my possessions as unconcernedly as if I were coming back the next day to fetch them.

As the captain handed me down the gangway, he said, smiling,

"This is a different sort of *Naval Engagements*, isn't it, Mrs. L—?"

After our boat had been filled, some of the men were ordered back into the ship to work at the pumps again. But, in spite of all their efforts, it was soon evident that all hope of saving her must be abandoned. The men once more took their places among us, and, last of all, the captain swung himself over the side. As he did so he cried out,

"Let's give the old ship three cheers, boys!"

And in answer three ringing cheers went forth from lips which might soon be stiff in death.

I would not join in the cheering, for I did not consider the old ship had done her duty.

We were told to row to a little distance, to be out of reach when she sank, but not finally to set off until we had seen the last of her. I turned my eyes away just before the end, for I knew I should feel more desolate and lonely when the waters had closed above her forever.

At twelve o'clock all was over. The American had sunk into her grave, and then the order was given to start. We were to steer for Cape Palmas, distant about 210 miles. Our boat was commanded by Mr. D—, fourth officer of the American. At the moment of departure he discovered he had no compass.

"How will you manage to steer?" I asked.

He answered, "Oh, by the stars."

But a passenger in one of the other boats had heard the words and threw him a small pocket compass. Mr. D— at first thought this would not be very useful, but he afterward found it of the greatest assistance, for he was able to fasten it to his breast and so keep it quite close to his eyes in the dark.

Our boat was a large one, and we were not cramped for room, though there were twenty in her altogether. Mr. — did all in his power to make us comfortable. The other lady passenger and myself lay down on the benches; my husband disposed himself between us on a bag of biscuits—not a very comfortable resting-place. The child was nursed by every one in turn, including the sailors. She slept most of the time, and when she was awake we fed her with sweet biscuits. Ship's biscuit neither then nor at any other time could she be induced to eat. She was constantly asking for water, and though from the first the quantity had been apportioned for us all, the order was that the little one should have as much as she required.

And so the time went by, oh! so wearily. I was suffering fearfully from sea-sickness and faintness, and the fierce heat of the sun made the very act of breathing a burden as we lay there so helpless and uncomfortable, only shielded

by umbrellas from the scorching rays. Oh! the horrible fears and forebodings that oppressed me, the nightmares that, waking or dozing, ran riot in my brain. I had not the slightest hope of being saved, for I had no idea that little boats could get on so bravely. Surely there has never been a hideous tale of shipwreck which I had not heard or read, and which I did not recall during those hours.

At last the sun went down, to our great relief, and night came and dragged through somehow. We had one bottle of champagne, and that, with occasionally a little beef-tea, sustained us. The other lady had a tin of condensed milk, and some of it mixed with a little water was given to the child. We slept occasionally from time to time, all except Mr. D——, and he was on duty almost unceasingly. Once, worn out with watching, he lay down to rest for a few minutes, but hardly had he dropped off to sleep when the boat was all on one side, and nearly overturned. The man he had left at the helm had got her "aback." Mr. D—— was on his feet in an instant, and from that moment scarcely closed his eyes while we were in his charge.

Well, the sun rose again, and another day came and went with nothing to break its monotonous horror. That afternoon, tossing restlessly on my uneasy couch and feeling I could not go through much more, I wearily expressed a determination to throw myself overboard. Only one consideration deterred me.

"Are there any sharks about here?" I asked Mr. D——.

"Plenty," he answered.

"And do they eat people before they are dead?"

"Invariably. Come, Mrs. L——, don't give way. You and I will live to laugh over our adventures out at the Cape yet."

His cheery voice and manner did me good, though he has told me since that his cheerfulness was all assumed, and that he was in reality a prey to the most fearful despondency.

At 6 P.M. of that day (Saturday) a sudden squall overtook us. The rain came down in torrents, and we were all quickly drenched. The wind, however,

proved itself a friend and helped us along rapidly in the right direction.

About seven those on the lookout perceived a light at some distance, and various were the conjectures to which this gave rise. Was it one of the American's boats? for we each carried a light. Was it a vessel which would pick us up and carry us to land?

At any rate, Mr. D—— refused to change his course until something more definite could be known. During an hour this phantom light puzzled us, and then Mr. D—— determined to send up one of the two rockets he possessed. He did so, but without result. It seemed like speaking to the dead. As time went on Mr. D—— felt more and more convinced that the light proceeded from some ship; it was too high up to be on one of our boats. He tried to inspire me with the same hope, but in vain. About twelve, amid breathless suspense, the second rocket was sent up—our last chance! And this time the signal was answered. But it was quite three hours before the vessel reached us, and during all this time I was too utterly weary, sick, and dispirited even to raise my head. It was only when the noise and movement around me told me that something had happened that I opened my eyes and looked about. And then never shall I forget my sensations. There, as it seemed, just above my head, was a ship with all her sails set, and glittering in the moonlight. Of what happened next I have no recollection. I only know I found myself on board, and learned that two of our boats, the captain's and the second officer's, had already been picked up by her, so that many of our friends were there to greet us. She was the Emma F. Herriman, trading with palm-oil along the coast of Africa. Her captain said that, should we not fall in with any vessel in the mean time, he would put in to Monrovia, the capital of Liberia, where we could wait until some ship should call that would take us back to Madeira.

The worst of our fears were at an end. We were no longer in danger of death from starvation, or from being thrown on some unfriendly coast where we might be attacked, and, perhaps, eaten, by savages.

This last was no idle or unfounded apprehension, for we were told that had we landed east of Cape Palmas, whither it was very likely we should have drifted, such in all probability would have been our fate.

I have said our worst fears were allayed. But for the rest, we seemed only to have exchanged one form of discomfort for another. The captain and mate of the bark were extremely kind, and did all they could for us, but they were very powerless to alleviate our discomfort. The only places below were a small sitting-cabin of the captain's, and a small sleeping-place opening out of it. Never could I have imagined anything so confined and uncomfortable as it all was. I put my child into the captain's bed, with another little one, a boy belonging to one of the other passengers. But for myself, I was very glad to leave the stifling atmosphere below and pass the night on deck, not caring, though I awoke in the morning drenched with rain.

Our American captain seemed to think we were still under his care, although he was no longer in command, and did all in his power for us.

"I wish I could provide you with some fresh clothing, Mrs. L—, ' he said to me, for my cotton dress had been thoroughly soaked in the squall of the previous night, "but I have nothing except a few clean shirts."

"I should be extremely obliged for one of those, captain," I answered.

Behold me then attired in a clean shirt of our captain's and a black skirt of our stewardess's—her "best one," she informed me somewhat aggrievedly when she saw I had appropriated it.

Several of the crew were negroes, and as my little girl had never before seen black people, I quite expected she would be frightened. But when a black boy, who somewhat resembled a lad on board the American, entered the cabin, she said,

"Mamma, there's James with his face blacked!"

About nine in the evening of Monday we experienced a tornado—a most violent storm of wind, rain, hail, thunder, and lightning. And the worst of it was that while it lasted we were all compelled to take shelter in the cabin ;

about forty of us in a space that would not have held ten comfortably.

Altogether the two days in that bark were very bad indeed. The overcrowding, the bad smells, the utter discomfort, were as hard to bear as danger and privation.

Toward three in the morning we sighted the Coanza, and our men fired off several shots in rapid succession to attract the attention of her crew. I remarked they would think there was a mutiny on board, and I afterward learned this was actually what they did think.

They were soon alongside, and all the Americans were transferred on board. Her captain courteously went out of his way to deposit us at Gran Bassa, where there was more likelihood of us meeting with an English vessel ; for, he said, if we had gone on to Monrovia, we should in all probability have had to wait there three weeks.

On the Coanza we were enabled to do a little *shopping*. The men are allowed to have a sort of store on the fore-castle. I bought a shady hat for the child, a hair-brush (price sixpence), and the most wonderful pair of boots that have ever been seen. To have walked down Regent Street in those boots would have created a sensation. But I was very glad to have them, as the thin slippers that I had been wearing on account of the heat had been soaked through several times.

Tuesday, at noon, we landed at Gran Bassa, being carried through the surf in the arms of negroes. Everything was a novelty to me, for these are places not visited by one Englishwoman in a thousand.

All the houses are built on logs, so that there is no ground-floor. Some of the rooms are very large and airy. My husband and I, the child and nurse, and two young ladies, our fellow-passengers, became the guests of a black lady and gentleman from America. Most of the inhabitants are descended from slaves who were captured on the West Coast of Africa and conveyed to America. Becoming troublesome after the emancipation, the American Government seized a portion of the coastline and settled them there, as an independent colony, in the very place whence their ancestors

had been carried. White people are very rare in these parts, but mine was the first white child that had ever been seen there, and the people flocked in crowds to gaze at her.

The house we were in was situated quite close to the shore, but the others were all quartered some way up-country, so we did not see much of each other. However, I had plenty to occupy me. My little one was quite happy playing with our hostess's black offspring, and I immediately made an excursion into the town, where I purchased linen, needles, cottons, and material for two or three dresses. Then my nurse and I sat down and worked. No one knows what work means unless they possess but one set of garments and that at the wash. I was wearing at this time a figured black grenadine, belonging to my hostess, over a white petticoat. My lady readers will be able to appreciate the tasteful effect of such a costume.

However, in a very few days I had made myself some underclothing and two neat cotton dresses. And very proud I was when I once more put on a whole suit, clean and tidy, and belonging to myself alone. I don't think I ever appreciated any apparel so highly.

On Thursday our host asked if we would like to go up the next day to where the rest of our friends were staying, dine there, and see something of the country. We should have to go part of the way by water, but this I did not mind: I was quite well and jolly again, and ready for a little amusement.

So it was arranged that we should start soon after seven the next morning. At the appointed time we white people were all ready, but our hostess took so long over her toilette that it was nearly eleven before we set out.

We were about half an hour in the boat, and then our road lay through the loveliest country I had ever seen. It is impossible for an English person to imagine the wealth and luxuriance of vegetation in these climes—the tangled growth of trees, flowers, and shrubs running riot in their uncultivated beauty.

A hammock had been provided for the children, and they went gayly along, carried by their sable bearers. We passed a very pleasant day with our friends. That part of the country is far

more picturesque than where we were living, but not so healthy.

The following day we received the joyful intelligence that the Senegal had arrived, on her way to Madeira, and most delighted were we to be once more on our way to civilized parts, where we could telegraph to our friends and await the next outward-bound vessel.

May 1st, at noon, we steamed away from Gran Bassa, and commenced the last, and for me most perilous, chapter of our adventures.

Although the Senegal was a great improvement on both the other boats, we still suffered from want of accommodation. The ladies' cabin had three more occupants than it was intended to hold; and as fresh air is to me of far more importance than anything else, I had a hammock slung on deck, and slept there very comfortably. I wrapped myself in my ulster, and the first night found in addition that a coat had been thrown over me, which was accounted for when I saw one of the men at a little distance sleeping in his shirt-sleeves.

Here I may as well say that it is quite impossible to give any idea of the kindness I experienced throughout from every one. To Mr. D—— I owe my life. He snatched me bodily from the very jaws of death. But, besides that, I am indebted to him, and all the rest, for a thousand acts of thoughtfulness and goodness.

The Senegal was to touch at Sierra Leone to take on board the governor of that place, who was going to England on a visit. I think we all rather fretted at the delay, and we petitioned the captain to proceed at once to Madeira. But it was impossible. A governor is not to be neglected, and we had to submit. For my own part, I am very glad it was so, or I should have missed making the acquaintance of one who proved a good friend and most pleasant companion.

I landed at Sierra Leone, and once more admired the wonderful fertility, the masses of foliage, and the fragrance everywhere.

Toward evening the governor's luggage was put on board, but his excellency did not make his appearance until midnight. At the moment of his arrival Captain K—— and I were indulging in an impromptu dance, which, con-

sidering the time and place, I have no doubt rather surprised his excellency. My partner asked him if he would join us, but he declined the invitation. I was introduced to him, and we remained talking for some time.

All next day I worked hard at a dress which I had cut out at Gran Bassa, but had not had time to complete. It was a black alpaca, and seemed to me just then a perfect marvel of elegance and comfort. I was longing for the time to put it on, and as there was still a good deal to do to it, I set some of the gentlemen to assist me with the *kilting*. I showed them exactly how the folds were to lie, and where to put the stitches, and really they acquitted themselves admirably in the task.

We were to stop on Thursday at Bathurst, an island in the Gambia under the same governorship as Sierra Leone, but superintended by an administrator. His excellency asked me if I should like to land, dine, and sleep at Government House, and see something of the place. Of course I would! The idea was enchanting, only, my husband had not been very well the last few days, and I feared it would not do for him to go. The governor, however, declared it would be the very best thing in the world for him—the only plan to restore him quickly to health; and he insisted that I should bring my nurse and child as well, so that I might be thoroughly comfortable.

We landed at Bathurst the next day, and a wonderfully enjoyable holiday we had of it. We and a few others, invited by his excellency, took possession of Government House. My husband, not being well enough to join the festivities, was ordered to bed in a luxurious room, and dosed with champagne—a tumblerful every hour by prescription of his excellency, who had been a physician before he was a governor.

The house is lovely, with superb rooms and staircases and corridors—quite a feast in themselves to eyes that had grown accustomed to dirt and confinement and discomfort. The whole of the top floor was given up to the ladies; and how we enjoyed our baths, and other toilette arrangements, to which we had been so long strangers!

In the afternoon I was introduced to

the oldest inhabitant, who took me out in a pony carriage and showed me some of the beauties of the place.

Then the dinner was delightful! just what you would have expected to find in England, and served with the utmost elegance and refinement. It must not be supposed that such results were achieved without a large amount of trouble. The governor's private secretary had worked indefatigably the whole morning, had ransacked the entire island for cooks, waiters, and even for sufficient plates, etc., to provide for so large a party. And the results were magnificent! I positively revelled in all the luxury after my recent surroundings.

I left the next day with much regret, which would have been increased tenfold had I known of the misery and peril still in store for me.

We had left Gran Bassa in the best of health. The captain of the Senegal said he never saw sixty white people leave that coast so free from fever. But a few days after our departure from Bathurst the enemy attacked us. One after another fell, stricken by the dreadful African fever as if by plague, until my husband, the child, and myself were the only ones of all the American crew and passengers whom it had not seized. You may be sure I had plenty to do at a time like this. I constituted myself head nurse, and went about from one to another of the sufferers administering medicine, food, laying wet cloths on burning brows, and doing my best all the time to keep myself healthy and hopeful. I think I owe my own immunity from the disease a little to my determination that I *would not* have it, and a good deal to my kind doctor the governor, who insisted on my drinking champagne at frequent intervals during the day, and who was quite unceasing in his care of and attention to me.

On Wednesday, the 11th we were coasting along Grand Canary, and those of us who were well enough to be about were gazing all the morning at the shore we hoped so soon to reach. After lunch I went down into the captain's cabin, with our American captain, to look at the chart, for I have a great fancy for always knowing precisely where I am. He pointed out to me the spot,

and I remember seeing the words "sunken rock" quite near to it.

As I went up again on deck the governor met me and said,

"You look quite worn out, Mrs. L——."

I owned to feeling a little tired, and he persuaded me to lie down on a locker near where my husband was sitting.

I had just lost myself in slumber when, with a horrible grating, crunching sound that is still in my ears, the ship stopped.

I rushed to the governor.

"What is it?"

"We're aground; that's all," he answered.

I seized upon the purser, who at that moment came on the poop with a face as white as a sheet, and in reply to my agitated inquiry he said,

"It's all right! see, we are going on again," and he pointed over the side of the ship to where the disturbance of the water showed the screw was working.

I believed him; and as I lay down again gave way to a few tears, for I felt it very cruel I should be frightened so, after all I had already gone through. I had intended to go to sleep once more, but something caused me to open my eyes, and there, just in front of me, was a solitary sailor cutting away the star-board quarter boat.

With a feeling of sickening horror I sprang to my feet, and at the same instant Mr. D——, the officer who had commanded our American boat, shouted, "Make haste, Mrs. L——, for God's sake make haste; fetch the child—there's not a moment to be lost!"

I needed no second warning, yet with all my haste my husband had called to me again and again, while I was hurriedly wrapping some things about the child and myself. Remembering our former experiences, I thrust some tins of beef-tea and condensed milk into my pocket, although the shore was in sight, almost within reach of a good swimmer. When I got up on deck Mr. D—— called to me, "Into the boat, quick! the ship is sinking; she can't last three minutes!"

But the boat was not yet lowered below the rail, and I refused to enter. I had heard so many stories of boats tipping up instead of going down evenly

into the water that I held back in spite of Mr. D——'s agonized entreaties. He found a way, however, to insure my obedience, for the next moment I saw my child lifted in, and there was nothing for me to do then but to follow. I saw nothing of what happened next, for feeling very nervous I sat down, hugged the child in my arms, and pulled my hat over my eyes. Then I felt a wave come over and drench us, then the boat slip away from under me, and the thought "so I am to be drowned after all" flashed through my mind. I had no hope of being rescued, and as the water closed over me, my one idea was how to drown most rapidly. To this end I swallowed all the salt water I could. I remember thinking it was not true that drowning people see all their past lives. I only thought of some friends and relations who would, I know, be sorry to hear that I was dead, and then of how very long it took to die.

Presently, after what seemed an eternity, I felt myself rising. Whether I touched something, or merely was conscious of an added gloom, I know not; but I felt I was rising *inside* the cap-sized boat. Fortunate it was that I still retained sufficient consciousness to force myself downward, for had I continued my upward course I should in all probability have injured myself by striking my head, and gone down beyond the reach of help. As it was, when I rose again I tried to climb up *outside*. I remember putting one hand over the other, and then—death, of so it seemed to me. How absurd it is to say that people can only die once! To all intents and purposes I died then. If I had never been revived, I should have felt nothing, suffered nothing ever again. I went through all the agonies of that supreme moment as surely as I shall when the hour comes for me to give up the ghost for the last time.

When I recovered consciousness some five hours later I was shrieking violently. They tell me I had been shrieking for some time, and I found it almost impossible to cease even when fully restored to life. I was in bed then in a rude hut on the sea-shore, tended, I need not say how carefully, by all my friends, who had almost despaired of seeing me recover. The rest had escaped with a

wetting, and were none the worse for the adventure. It was only I who had been drowned.

Later I learned the story of my rescue.

As soon as the Senegal struck, the captain made up his mind to beach her if there were yet time, as he hoped and believed there was, and the event proved that he was right. It seems she had a water-tight compartment in front of the engine-room which prevented her filling with the rapidity Mr. D—— had expected.

Through some accident or misunderstanding, our boat was lowered right into the water at once while the ship was still moving, instead of waiting until the screw had stopped, as Mr. D—— had intended should be done. In descending she swung under the screw and was cut in half, leaving all her occupants struggling in the water. Happily we were flung away from—instead of toward—the ship; for had the boat turned over in a contrary direction we must inevitably have perished.

Mr. D—— dived for me three times, and at last found me head downward and brought me to the surface. By this time a Portuguese fishing boat had seen our danger and come to our assistance. But when Mr. D—— swam alongside with his apparently lifeless burden, the Portuguese sailors refused to allow him to bring it on board, as, in the superstitions of their country, it is unlucky to take a *corpse* into a boat. My gallant preserver had to enforce his arguments with some (literally) *knock down* arguments before the men could be induced to listen to reason.

My child had been saved by a noble old gentleman, whom I remember standing near us when we were being persuaded to get into the boat. He refused to come at first, saying, "No, Ben's not here; I shan't go."

Fortunately Ben, his son, appeared in time; and to the old gentleman's courage and strength my little one owes her life.

The next morning a wagonette was procured, and I was laid in, with pillows and rugs—a very helpless creature indeed. On the way I heard my husband and the governor, who accompanied me, expatiating on the beauty of the

scenery through which we passed; but I was too weak and languid even to raise my head.

Our destination was the house of one of the great people, which had been offered to the governor. But he, with the consideration he had shown me all along, had said, "You would do me a much greater favor if you would offer it to Mrs. L——."

Accordingly it was placed at my disposal. My host and hostess were Spaniards, and blessed with a very numerous progeny; and the continual scampering through halls and corridors was hardly soothing to my nerves in the state they were then in.

My little girl had plenty of playmates, but she was rather indignant with them for not understanding English.

An hour after our arrival there we heard from the captain of the American that the Teuton, outward bound, had arrived. She had left Madeira the day previously, and had been told to call at all the islands to see if there were any tidings of the shipwrecked passengers. From her we learned that three more of the boats had been picked up and taken to Madeira in the Congo.

"Would we go on to the Cape?" the captain of the Teuton wanted to know. But as far as I was concerned that was out of the question; I was far too ill. And it was pointed out to him that it was his duty to return with us to Madeira. This he consented to do, but there was some difficulty about their health papers, which had been left at Tenerife. Our good friend the governor was once more to the fore. He was the only one who could speak Spanish, and he "interviewed" the officials, talked, explained, argued, until all obstacles were overcome, and we were told the ship would start the next morning at ten o'clock.

Directly after breakfast a carriage was sent to take me to the shore, where we embarked in a small boat. Still too weak to stand, I was supported up the gangway of the Teuton, at the head of which stood many of our former fellow-passengers, who had been rescued by the Congo, and were now on their way to the Cape. One of the ladies kindly took me into her berth, but a few minutes afterward the captain's cabin was

placed at my disposal. Strangely enough, this was the very captain in whose vessel I had sailed to the Cape on my first voyage five years ago. His cabin was amidships on the bridge, away from all the noise, and therefore very welcome to me.

We started at eleven, and one would really have thought now that I was entitled to a little peace and rest; but no, we experienced the most terrible weather.

The ship rolled till the life-boat was washed away. The deck was breast high in water, and communication cut off between the bridge and saloon. I lay helpless on the captain's bed, carefully watched and tended by his excellency, who, though suffering fearfully from sea-sickness, never relaxed his attention to me. I was still so ill that I believe all my friends thought I was going to die—I could read it in their faces, and in their hesitation, when I questioned them.

After thirty-one hours' ceaseless tossing we reached Madeira. I was lifted into a boat, and laid down at the bottom on a mattress. The governor was preparing to accompany me.

"Can you swim?" I asked him. And on his replying in the negative, I said, "Then I must have the captain with me instead."

Immediately on landing I insisted, with the ingratitude and caprice natural to invalids, on seeing another doctor, informing his excellency that I did not believe in him at all—a very pretty return to make for all his goodness to me.

My new doctor gave me something to soothe my nerves, and prescribed total rest and quiet, saying that of course I must not think of getting up that day.

I acquiesced meekly, and after he had gone, amused myself by indulging in a violent fit of tears which quite alarmed my husband. He sent for the governor, who on seeing me said; "Let her cry; it will do her good." Whereupon I immediately left off and dried my eyes, then got up, dressed myself and went into the drawing-room on the sofa. Here I had quite a *levée*; but I was destined very shortly to lose the greater number of my friends. Very soon the news was brought that the Nyanza, homeward bound, Union Steamship,

was in sight, and that all those who intended returning to England must get ready to embark at once. I was not yet sufficiently recovered to make the voyage, even had we determined to return. But we were quite undecided. I felt that if I went back to England then my voyaging was over; I should never have the courage to start afresh, and it was necessary that my husband should go back to the Cape. So I had the pain of seeing my friends start on their homeward journey, and very desolate I felt when they had departed.

The next day my doctor expressed himself very pleased with the improvement I had made, attributed it entirely to my having obeyed his orders, and recommended me still to remain quietly in bed for a little longer. I quite agreed with him, and that day came down to dinner.

By degrees I grew stronger, and seemed to take hold of life once more, and then spend a very pleasant ten days exploring the island in hammocks, and purchasing things to replace those we had lost.

On Tuesday, May 26th, we embarked in the Trojan for Cape Town. And as if we were fated not to accomplish one portion of this adventurous voyage in perfect security, the Trojan happened to be a new ship, and in consequence of boilers "priming" and valves "giving out," we stopped at least once in every twenty-four hours. And every stoppage set my heart beating with sudden terror. Altogether, I was in a fearful state of nervousness. I used to prowl about half the night and wonder if it were possible we could ever reach the Cape in safety. However, it was over at last. After all our perils we reached our destination, and I don't think at the moment of landing I could have been brought to believe how very soon I should again brave the dangers of the deep.

My nerves were a good deal shaken, and my health impaired. For some time I was subject to fits of extreme depression. The horrors I had gone through recurred to me with painful vividness, especially at night, keeping me from sleep sometimes for hours. At last my doctor told me the best thing I could do would be to take another sea

voyage. It seemed rather a desperate remedy, but, strange to say, one which did not displease me, and at last I began to look forward to it. So with my child I once more set sail in the Trojan for old England. The spell was broken, adventure and peril no longer pursued me. The voyage was accomplished in almost uninterrupted fine weather, so that even my old enemy, sea-sickness,

left me in peace, and I landed in the best of health and spirits.

My story is done. If it serves to encourage and cheer any heart in time of danger, it will not have been written in vain.

Before this appears I shall have started once more for my home across the sea. Will those who have accompanied me through past peril join in wishing me *bon voyage!*—*Temple Bar.*

"YES."

THEY stood above the world,
In a world apart,
And she drooped her happy eyes,
And stilled the throbbing pulses
Of her happy heart.
And the moonlight fell above her,
Her secret to discover,
And the moonbeams kissed her hair,
As though no human lover
Had laid his kisses there.

"Look up, brown eyes," he said,
"And answer mine,
Lift up those silken fringes,
That hide a happy light,
Almost divine."
The jealous moonlight drifted
To the finger half uplifted,
Where shone the opal ring—
Where the colors danced and shifted
On the pretty, changeful thing.

Just the old, old story,
Of light and shade,
Love, like the opal tender,
Like it, maybe to vary—
Maybe to fade.
Just the old, tender story,
Just a glimpse of morning glory,
In an earthly paradise,
With shadowy reflections,
In a pair of sweet brown eyes.

Brown eyes a man might well
Be proud to win!
Open, to hold his image,
Shut, under silken lashes,
Only to shut him in.
Oh! glad eyes look together,
For life's dark, stormy weather,
Grows to a fairer thing
When young eyes look upon it
Through a slender wedding ring.

Temple Bar.

VILLAGE LIFE IN NEW ENGLAND.

BY A NON-RESIDENT AMERICAN.

E PLURIBUS UNUM is the motto of the United States, and it describes the country more accurately than those who adopted it could have anticipated. It is not only one State made up of many, but it is one nation made up of many races. No such mingling of various races has ever taken place before in the history of the world. It is also one country in which may be found all climates and all stages of civilization. There is one Government, with all forms of social life and an almost infinite variety of laws and customs. New England has always been the centre of that Anglo-Saxon influence which has thus far dominated all others, and has been gradually assimilating all foreign elements to itself. Up to thirty years ago the progress of unification was sure and steady. Since that time the flood of immigration, and the expansion of the settled territory of the Union, has made the work more difficult and the result less certain. Foreign influences have reacted to some extent upon New England itself; but, on the other hand, the great Middle States and many of the Western have come to be so thoroughly in sympathy with New England ideas that the prospect is, perhaps, as hopeful as ever.

The mother country (why do we always say the *mother country* while the Germans know only a *father land*?) has every reason to be interested in everything that pertains to New England. Forty years ago the people were of purer English blood than those of any county in England. They were all descended from the families who came here from 1620 to 1650. Since 1840 there has been a large Irish immigration, but up to the present time there has been very little intermarriage between them and the old English families. There has been an occasional mixture of Scotch or Huguenot blood in a few families, but not enough to exert any general influence. The population is thoroughly English, and speaks the English language with more purity than the common people of any part of England. Two

hundred years, with a totally different environment from that of the old country, has somewhat modified or differentiated the New Englander; but it is questionable whether he does not bear more resemblance to our common ancestors than does the Englishman of to-day. The "pilgrim fathers," whose portraits are carefully preserved, certainly had more of the Yankee than the John Bull in their faces. As to mental development, the English Bible and the English classics are our common inheritance, and the later English literature has been as widely read here as there.

Village life in New England is a study of special interest, because it is a type of village life wherever New England ideas are dominant, because it is the real life of the people of New England, and because it practically illustrates the social progress of the country. I was born in a New England village, and have just returned to it after having spent half my life in Europe. Fifty years ago it was a very small village, built on two streets, which crossed at right angles, and gave the name of *The Four Corners* to the village; but the township was large, and had five thousand inhabitants, who were generally engaged in farming, although there were five or six small factories and furnaces in different parts of the township, and many of the farmers devoted a portion of their time to making nails at small forges at their own houses. The township was divided into parishes, each with its church, parsonage, and glebe of the Congregational order, as this was the old Established Church of Massachusetts; but the Baptists had invaded the territory and had a strong church, the only one in the village, as the parish church was two miles away. It was also divided into some twenty school districts, each one of which had its school-house, a small one-story wooden building, often in the midst of the woods, in which there was always a school in winter with a male teacher, and generally for three months in summer with a female teacher. In the vil-

lage was an "academy," which fitted students for college, and also gave a higher education to girls. All the schools were for both sexes. The common schools were free to all, and the districts compelled by law to maintain them by general taxation. The instruction was sometimes good and sometimes inferior, but the teachers had to pass an examination by a town committee before they could teach, and incompetent ones who passed this ordeal were not unfrequently turned out of doors by their scholars. The teachers were generally young men from the colleges, who taught a few months in the year to earn money for their own education, and many of the district-school teachers have since become the most distinguished men in America. They generally "boarded round," each family in the district entertaining them in turn. Their influence was often very great; they came from the outside world; they introduced a new element of life into the farmers' families, and generally exerted an inspiring influence over their scholars. Not a few young men found the best of wives in these back-country school-houses. The practical disadvantage of a frequent change of teachers was very much less than might have been anticipated; and, on the whole, I believe that those old schools were quite equal to the more pretentious and costly ones of the present day. They had one supreme advantage. They did not educate children into a distaste for work; nor teach every farmer's son to desert his home as soon as he was his own master. They made scholars of the cleverer boys, and inspired them to push on to the college and the university. They gave a practical education to all. They developed individuality and independence of character. I remember the years that I spent in such a school with unmixed pleasure.

The church and the school-house were the corner-stones of New England society. Next to these was the "town-house." This was a venerable and ugly wooden building, painted yellow, and full of narrow, high, straight-backed benches. Here the "town meetings" were held, and they were the delight of my boyhood. This was the school of government and political science.

Town government in America is purely democratic, and is the unit in our system, the State government being carried on by representatives from the towns, and the Central government by representatives from the States. All the citizens meet annually in the town-house to discuss the interests of the town, to decide upon the taxes and the expenditures of the year, and to elect officers. Here is absolute equality, and in those old days I heard debates on political economy and questions of government which have influenced my life. Long-winded speeches were not tolerated, but there was a continual fire of ideas, facts, and fun. The language was generally rough and uncouth—the jokes were broad and homely, but they came from men who knew what they wanted, and understood what they were talking about. Outside there was always a sort of fair, with booths for the sale of food and drinks. Nothing rivalled the town meetings in my eyes, except the annual "muster," when the militia of the county went into camp every autumn for a few days of exercise. This was a holiday for the whole country round, and combined the pomp of war with the gayeties of a fair. Gunpowder and brilliant uniforms always turn the heads of country people, and officers on horseback are always heroes—to boys at least. The militia was popular at that time, and kept up by law. The people were proud of it, and believed it to be invincible; but it is a curious fact that since we have had our experience of real war, the militia has fallen into discredit, and there are now hardly troops enough in all Massachusetts to quell a serious riot.

The only other public places in the village were the taverns and "stores." These country stores sold everything—they were curiosity shops, combining all branches of business in one small room, and in the evening they were common places of resort, where men met to discuss the politics of the day, and to drink. Drinking was universal, and I have examined old account books which show that even the Congregational ministers could not have a meeting without consuming rum by the gallon. Nothing could be done without rum, and of course drunkenness was the most preva-

lent vice, and liquor-selling the most profitable business. In those days newspapers were few, and the mania for travelling, which has seized upon the present age, was unknown. Then men were born, grew old, and died, without going beyond their native village. Mail coaches with four and sometimes six horses passed through the village every day, but postage was very high, and letters were almost as few as the newspapers. But the few weekly papers which were taken were edited with ability, and were carefully read and fully discussed through the long winter evenings around the stove of the store. As the glass went round those discussions often became very violent, and sometimes ended in blows. I very well remember one of the sages who presided over these nightly meetings—a lean, lank, lantern-jawed old man, with long hair and shabby clothes, who sat with his elbows on his knees and chewed tobacco, but who was a man of considerable wealth, with a very clear head and a wonderful knowledge of human nature. This was the strong point of the village politicians of those days, who read few books or papers, but who studied men and knew how to influence them.

There was of course a social life in the village quite apart from these unique symposia. There were evening parties, dances, and tea-drinkings, to say nothing of corn-husking and quilting bees, singing schools and spelling-matches, where the young people "did their courting." In some of these there was no little form and ceremony, very much after the old English fashions. Others were more free, and ended in fun and frolic. But there was always a certain Puritan reserve in the relations of the sexes, and bashfulness was characteristic of both. Every New England boy grew up with a profound respect for woman; and sexual immorality was very rare. In fact, at that time crime was almost unknown in the village, and no one thought of locking his door at night—a singular fact, considering the amount of drunkenness.

The style of living in the village was very simple. The houses were all of wood, and in general they were rather scantily furnished, although in many houses the furniture was of solid mahoga-

ny, and handed down from one generation to another. The best rooms were seldom used, or even opened. There were no stoves or grates—nothing but open wood-fires; and the churches were never warmed, even in midwinter. The spinning-wheel and loom were still in use, and the people ate but little beyond what they raised upon their own farms. There was no market in the village, but there was a butcher who occasionally sold meat from his cart through the town. The people were temperate in eating, if not in drinking. In the midst of this simplicity of life there was no little culture and refinement. There were gentlemen and ladies in some of these farm-houses who would have done honor to any society in the world; who knew how to cultivate the fields or to make butter and cheese, but who could read Greek and Latin, and sometimes Hebrew; were familiar with English literature, with theology, and politics, as well as with the arts and accomplishments of refined society. And they did not feel lost or lonely in their country homes, as they might now in this age of universal locomotion.

The village to-day is as characteristic a New England village as it was fifty years ago, but it belongs now to the modern New England, and not to the olden time, which I have dwelt upon for the purpose of illustrating more fully the social changes which have taken place. It is now a railway centre. In place of the few scattered houses on two streets, there is a population of more than 3000, with shops, markets, and almost all the conveniences of a city. It is lighted with gas, the streets are watered, and, although the houses are still all of wood, there are some buildings of no little architectural merit. Many of the streets are ornamented with beautiful trees, and most of the houses have trees and gardens about them. There is no regular place of amusement, but the large and beautiful town-hall is almost constantly in use for this purpose, and there are also various clubs and societies. All summer there is a weekly promenade concert in one of the streets, and during the winter in the town-hall. There is everywhere an appearance of great material prosperity, and, so far as I can learn, there is not a

family in the village poor enough to need charitable aid. Even the Irish families are not poor. But there is much that is peculiar and worthy of consideration in this material growth. It is remarkable that the population of the whole township has increased during this period only about 25 per cent, and that while land in the village has risen in value 1000 per cent, in other parts of the town it is worth no more, and in many cases much less, than it was fifty years ago. A farm of 200 acres, two miles from the village, may now be purchased for much less than the cost of the buildings upon it. The amount of forest land has increased at least 25 per cent, and many houses have been moved bodily from the farms into the village. At the same time that the farmers have been moving from their farms into the village, all of the old manufactories have died a natural death. The cotton factories were too small to compete with those at Lowell and Fall River. The furnaces could not compete with those in England and Pennsylvania. Wrought nails were superseded by those made by machinery, and competition destroyed the manufacture of agricultural implements. The valuable water-power in the town now works but a single mill, and that is a new one for woollen goods. Steam factories have been erected in the village for shoes, hats, needles, and boxes, but the value of the goods manufactured is not greater than it was fifty years ago. Once outside the village, the ruined mills and deserted farms speak rather of decay than of prosperity. In many parts of New England the Irish have come in and occupied the old farms, but here the rocky soil seems to be unattractive even to them. The farmers who are left are now beginning to devote themselves to the production of fruit, vegetables, and other things, which find a ready market in the neighboring cities, while they buy their corn from the West. In this way they can live with comfort, although they would probably all be glad to sell their farms and move into the village.

The people of the village seem to be industrious, for there are no idle men seen in the streets, and it is difficult to find an extra laborer when one is needed. Every one seems to live in compara-

tive luxury, although there is not a man in the town worth £20,000 sterling, and very few worth £5000. A very large number of families keep a horse and carriage, and there are four flourishing stables which let horses by the hour. Every one is well dressed, and I think there are few houses where meat is not eaten twice a day—few where the floors are not carpeted, and the rooms well furnished with expensive furniture. A good average house rents for £40 sterling a year, but most of them are owned by their occupants. The taxes amount to one and one quarter per cent on the assessed value of real and personal property, but a skilled laborer worth a thousand pounds can pay his annual tax by sixteen or eighteen days' labor. The only sufferers from the taxation are those who own unproductive real estate, and are not laborers. These are very few. There is a savings bank in the town, which has been established only a few years, but its deposits amount to £65,000 sterling, and large amounts are known to be deposited in out-of-town banks. The town has no debt of any consequence. So far as its material prosperity is concerned, European socialists could hardly dream of a higher ideal. No rich, no poor,* no tyrannical landlords or manufacturers, and no oppressed laborers; but all enjoying everything that is essential to human development. All this exists, however, without the overthrow of either the Church or the State; and infidel beer-drinking German reformers might be surprised to learn that this happy state of society is due largely to the moral and religious character of the people. There is not a liquor-shop or beer-garden in the town, and hardly a man who

* There are persons in the township who receive aid from the town; nineteen superannuated or incompetent persons are very comfortably supported in the almshouse; thirty men and twenty-nine women received aid last year at their homes on account of illness or calamity of some kind. The whole amount expended by the town (population 5500) for the support of the almshouse and aid to individuals was about one thousand pounds. Very few of the fifty-nine persons aided were entitled to it, and it would undoubtedly have been better for them and for the community if they had been left to the care of their neighbors and friends. In England not one of them would have applied for aid.

ever takes anything stronger than tea or coffee. This is the most astonishing change which has taken place in the town in these fifty years. It is the result of a combination of moral influences and legal enactments. Neither would have accomplished much without the other, but for many years the laws were of a mild type, and the law of the State now is a local-option law. The change has been brought about chiefly by moral means, and at the outset required great personal sacrifices on the part of many leading men. The result has fully repaid them. I do not find that men save all, or even a greater part of the money formerly spent on drink. They spend it, however, for the comfort of their families, and for luxuries which elevate rather than degrade them. The gain in the increased happiness in family life is incalculable. The general moral character of the people is very good—better, on the whole, than it was fifty years ago, although some persons are of the opinion that men do not realize their obligation to pay their debts as fully as they did before the abolition of imprisonment for debt. Whatever may be the cause, it must be confessed that public sentiment is not what it ought to be on this subject in town or country, in New England or Old England. One result of the change in the law is that in most of the shops in the village no credit is given, which is an advantage to the buyer as well as the seller. Crime is not more common than it was fifty years ago, and is confined almost exclusively to the foreign population; but before the passage of a severe law last year against tramps, the country was overrun with them, and the people learned to use locks upon their doors. The law was effectual, and tramps have disappeared from the State.

Religion is the basis of morality, and there has certainly been a steady growth in the religious character of the population of the town. There are now four churches in the village, and six others in what formerly constituted the township. Fifty per cent of the village population are to be found in the churches every Sabbath, and religious meetings are well attended two or three evenings in the week. The preaching is less doctrinal and more practical, and sectarian

distinctions have much less influence. There is a frequent interchange of pulpits by clergymen of different denominations, and union meetings are very common. There is a kindly feeling even toward the Roman Catholics. The only modern form of unbelief which seems to have gained any place in the town is Spiritualism. A few years ago this threatened to make serious inroads upon the churches, and regular services are still maintained by believers, but it seems to have spent its force, and is now rapidly losing ground. There are Atheists, Agnostics, Positivists, and other unbelievers, in the town, as there were fifty years ago; but they are not numerous, and have little influence. The Sabbath is not generally observed with as much strictness as it was, but it is still a day of rest and religious worship. The spirit of the Puritans is still dominant.

In education it is generally believed by the people that they are far in advance of their fathers. There have certainly been great changes in many respects. There are five hundred daily papers taken in the town. A weekly and a monthly are published there, and every family takes at least one weekly paper. There is a town library of 3000 volumes, very well selected, and the number of volumes taken out during the last year was 20,804. This library, curiously enough, is supported by a tax on dogs, which produces a hundred pounds a year. Music and art are cultivated in the town, which boasts of several very fair painters and musicians. Public lectures are common, and there are several literary societies. In the olden times it was a very rare thing for any one to leave the town except on business, but now there is almost a mania for travel. Almost half the families in the village go to some watering-place in the summer, and a number have cottages on one of the islands off the coast, where is to be seen a new variety of American social life, which is worthy of a study by itself. The home life of a New Englander is ordinarily as private and exclusive as that of an Englishman, but here everything is reversed. Every door is open, and life is made as public as possible. For amusements they have an endless round—religious meetings, conventions,

lectures, and concerts, with sea-bathing and fishing. Some ten thousand persons congregate at this unique watering-place every summer. Martha's Vineyard, as the island is called, is far better worth a visit than aristocratic Newport. I know of no place like it in the world. This summer life, and the more extended travel, which is very common, is no doubt a species of education which was unknown fifty years ago, and has a certain value along with some disadvantages.

But the great pride of the village is its public schools, on which the town expends a thousand pounds a year, in addition to another thousand on the seventeen schools in other parts of the township. The village schools are six, with eleven teachers, and about 500 scholars. They are called the Primary, Higher Primary, Lower Intermediate, Intermediate, Grammar, and High Schools. Two of the teachers are men with salaries of £17 and £24 a month. The others are women with salaries of from £6 to £10 a month. There are sixty scholars in the High School, which has a four years' course, and in which instruction is given in Greek, Latin, French, Mathematics as far as surveying, Physiology, Natural History, Physical Geography, English Literature, History, Geology, Chemistry, Physics, Botany, and Civil Government. All the schools are free, and scholars living at a distance are brought to school at the expense of the town. They usually enter the High School at the age of fourteen. The buildings for the village schools are commodious, but less expensive than those in many other towns. The material arrangements are good, and the discipline is strict; but it may be questioned whether there is much real improvement over the old district-schools of fifty years ago. There is more display and more expense, but a well-known American writer has lately condemned the public schools of this State as utterly impracticable and unscientific, as a cross between a cotton factory and a model prison. This is an extreme view, but it is true that they are unpractical, superficial, and to some extent at least adapted to discourage the taste for honest labor, and to develop self-conceit

rather than solid learning. There are many who question very seriously the propriety of giving a High-School education at the expense of the State, who fear that we are raising up a class of demagogues too proud to work, too ignorant to earn their living in the learned professions, and accustomed to look to the State for aid, who will make the most dangerous and unscrupulous of politicians. The State should furnish to all a plain practical education, scientifically adapted to make better farmers, mechanics, and merchants, and leave all higher education to be paid for by those who can appreciate it. The history of America, especially of our public men, shows that poverty is no hindrance to genius, that free secondary education is not necessary to stimulate those who are qualified to appreciate it. Such views are not popular now, because there is a vague belief among the people that free education is a natural right, and universal education a panacea for all the evils in the land. Common-sense will no doubt prevail in the end, but blind sentiment rules at present, even in New England. We are not yet prepared to offer our free-school system to England as a model for her to follow. We have still too much to learn ourselves.

The superficial nature of our education is seen in many things, which prove that even New England villages have not yet attained any Utopian perfection. They are much nearer perfection than our cities, however. There is no fraud or corruption in the administration, but there is a great deal of extravagance and stupidity in many cases. Within twenty years the taxes have been doubled without any corresponding advantages, and in some towns tripled. In the town of which I am writing £1700 was expended on roads, and this is about the usual annual expenditure; but there is not a properly built road in the town. On this subject the authorities have only two ideas—the roads must be broad and straight; there is also a general impression that there cannot be too many roads. After leaving the village, the town is a labyrinth of roads, cut in all directions through the wild woods, wide enough for a city, but often not used once a day. But there is not a rod

of paved or macadamized road in the township. The bridges are as unsatisfactory as the roads.

Another illustration of a different kind will show another phase of the results of our educational system. I think it is an acknowledged fact that our judges, lawyers, and physicians, if not our clergy, as a whole, are not so thoroughly educated as they were a generation ago. In this village, for example, out of six doctors of medicine only one has had even a nominally complete education. I think the same thing is true of the majority of the lawyers. The people are not educated up to the point of appreciating the value of thorough education. There is no country in the civilized world where ignorant quacks and deliberate swindlers obtain the patronage from respectable people that they do in America. According to the theory, the legislators and public men of the country ought to have steadily improved in quality as the number of educated men brought forward by the free-school system increased; but it is a generally acknowledged fact that our legislative assemblies and politicians have rather deteriorated. There seems to be something wrong in the system, which not only brings forward inferior men, but also teaches the people to be satisfied with such men. There are, of course, thoroughly educated men, and great men, in high official positions. The President-elect, Mr. Garfield, is not only a statesman, but a scholar; but who are the men who are to represent New England in the next Con-

gress? How do they compare with the great men of past generations? They are generally honest and respectable men, for which we are duly thankful; but very few of them have ever been thought of as men of superior ability, and the culture of Boston is represented by a German Jew who deals in ready-made clothing. This is no doubt an honorable calling, and there are worse and weaker men in Congress than he; but it is not the old style of New England statesmen.

This is a digression. To return to our New England village. While it is by no means perfect, it certainly comes nearer to an ideal village than anything I have seen in Europe. There is absolute civil and religious liberty. Even public opinion is not tyrannical there. Individual rights are respected, without any infringement upon the dignity and supremacy of the law. The people are moral and religious, without being uncharitable or fanatical. There are no social castes, not even such as a late writer in the *Times* declares must exist in all communities. The people are contented and happy. They are intelligent, acquainted with what goes on in the world, believe in progress, and contribute freely not only to support their own institutions, but for the enlightenment of the world. It is not strange that they believe in the form of government which secures all this to them, nor that they honor their English ancestors, whose wisdom and piety were the foundation of New England society.—*Contemporary Review*.

A FORGOTTEN HERO.

BY THE AUTHOR OF "A CANADIAN HEROINE."

THE name of Jacques Cartier, first explorer of the St. Lawrence, remains to this day in Canada an honored name and very little more—in France it is almost entirely forgotten—in England almost entirely unknown. Yet, born in a time of great possibilities and of great deeds, the man who bore that name was well worthy of remembrance, not only because he was in his own person a true hero—brave, honest, and God-fearing—but also because he gave to France a

territory larger than all Europe, and laid for England the first foundation of a colony which is almost an empire.

Of a family long settled and well known in the busy town of St. Malo, Jacques Cartier was born at that place on December 31, 1494. Scarcely anything is known of his boyhood, but since the port was full of seafaring men, his first recollections were, no doubt, associated with marvellous stories of the newly-discovered Western India, and of

the mysterious northern seas, ice-laden and fog-veiled, through which there must surely be somewhere the passage to Cathay. While he was still a child, fishermen from St. Malo had begun to go with those of Dieppe and other ports to fish for cod, sailing boldly out into the still almost unknown ocean in frail little barks built only for coasting voyages. As he grew up he joined some of these expeditions, and evidently prospered, for at twenty-five we find him a person of some consequence, master of a little *Manoir* of Lemoillou, and husband of the *Demoiselle Catherine des Granches*.

It was not, however, until 1534, when Cartier was forty years of age, that his first great enterprise was undertaken. At that time he boldly presented himself to Philippe de Chabot-Brion, Admiral of France, proposing to go and explore, in the king's name, and for his Majesty's benefit, the shores of *Terre-Neuve*. This name seems to have been given, rather vaguely, to the coast of North America from Labrador to the South of Cape Breton, and Cartier thought that a coast so broken, and hitherto so little known, might, perhaps, conceal that passage to India, to discover which would be fame indeed. De Chabot was one of the king's oldest and most intimate friends; to obtain his patronage was almost to secure the permission needed. The time of the proposal, too, was fortunate. The Treaty of Cambrai had left Francis at leisure to think of the affairs of his kingdom, and by his defeat and imprisonment he was sufficiently exasperated against Spain to feel a lively jealousy of her achievements in the new world. He had already sent out one expedition under Verazano, but with no satisfactory results. He seems at once to have received the idea favorably, and agreed to furnish the Malouin captain with two ships and all that was necessary for his voyage.

On April 20, 1534, Cartier sailed from St. Malo. We cannot follow the course of his voyage here, though his own narrative, simple, direct, full of every kind of useful detail, and empty of all self-glorification, is exceedingly tempting. He followed in the track of John Cabot, until on May 11th he reached Newfoundland (or *Terre Neufve*, as he

writes it), and from thence explored the coasts north and south of that island. So discouraging, however, was the result of this exploration that he writes in his journal: "It ought not to be called a new *land*, but a mass of rocks and stones, terrible and roughly piled together. . . . In fact, I am much inclined to think that this is the land God gave to Cain." Still he could not consider his labor lost, since those inhospitable rocks might yet hide the wished-for Western passage.

It was near the end of June when the two small ships discovered pleasanter regions and safe harbors. From that moment Cartier changed his opinion of the new country, and his pages are full of accounts of its beauty and fertility. He made the acquaintance of some friendly Indians, and persuaded them to intrust to him two boys (apparently of their chief's family) to be taken to France. He erected a great wooden cross with much solemnity on Cape Gaspé, and then, winter approaching, and the navigation again becoming difficult, he turned homeward, and reached St. Malo safe and well on September 5th.

So well satisfied was King Francis with what had been done on this first voyage that he at once resolved to send out another expedition in the following year, and to place the command in the same capable hands. Cartier received the title of "*Capitaine Général et Pilote du Roy*," and was provided with three ships, each with its captain and crew, and permitted to take with him a number of volunteers, many of them young men of good family. The two Indian boys were also on board the ships, which sailed from St. Malo on May 19, 1535.

The expedition made its way directly and without special adventures (except the encountering some bad weather) to the coast of Labrador. Here, apparently at Mingan (Cartier called it St. Nicolas), they set up a great wooden cross, the position of which is carefully described for the benefit of future voyagers. Leaving this place, they met with a terrible storm, from which they thankfully took refuge in a beautiful bay full of islands. To this place, and *not* to "the great river of Canada," Cartier gave the name of St. Laurent. It seems to have been at the mouth of the River St. John,

Labrador; but it is impossible to say when or why the name, originally attached to this harbor of refuge, was applied to the whole magnificent stream and gulf which now bear it.

Carefully exploring the coasts as he went on, the captain, always anxiously mindful of that "perfection"—the passage to Cathay—which more than all else would reward his toils, led his little fleet along the northern shores of the gulf, past the dangerous island of Anticosti, and the innumerable smaller ones lying higher up, until he reached "the country of Saguenay" and the great river which still bears that name. Here he was not only pleased with the beauty of richly wooded and watered lands, and with the report of the Indians that copper was found in the neighborhood, but also saw some creatures not more wonderful to his eyes than his description of them is to our ears. "Here we saw," he says, "some fishes such as no man had seen or heard of. They were the size of porpoises, with heads like greyhounds, well made and white as snow, without spot. The Indians called them 'adhothings,' and said they were good to eat."

Sailing on past Ile aux Cendres (which still retains the name he gave it), and other small islands, he anchored at last, one fair September evening, near the north shore at the lower end of the Ile d'Orléans. "Here," he says, "began the land and province of Canada," and here he allowed his men to go ashore, and to accept freely the presents of fruit, maize, and fish brought to them by the Indians.

The boys, Taignoagny and Domagaya, who had been in France, were received with the greatest joy by their countrymen, and there seems to have been a tremendous uproar of welcome about the ships all that evening and night. Next day "the lord of Canada, who was called Donacona by name, and Agouhanna as his title," came in state to visit the strangers. Standing up in his canoe, he addressed the captain in "une predication et preschement," with gestures "d'une merveilleuse sorte," expressive of confidence and friendship, and was easily persuaded to taste the bread and wine presented to him.

The difference between the conven-

tional Indian of romance, and the real and perfectly unsophisticated Indians of this true narrative, is very wonderful. Not only Donacona and his people, but all the other tribes whom Cartier met with, seem to have been simple, almost childish *sauvages*, wild men, friendly, hospitable, confiding; and cunning only in the clumsiest and most transparent fashion. Like children, they show themselves sometimes wilful and unreasonable; but the worst complaint Cartier makes of them is that they were "marvellous thieves," while they certainly seem to have been quite as ready to give as to take.

After a little delay the ships left their anchorage, and, passing below the beautiful fall of Montmorenci with its veil of silver mist, coasted the green north shore, drawing near with wonder to the grand cliffs that rose majestically, towering above the broad waters, as if Nature had made her citadel there and bade the strangers stand back from her impregnable ramparts. At the foot of the rock fortress they again dropped their anchors, sheltering themselves at the mouth of a stream which flowed quietly into the great river from the north. To this smaller stream they gave the name of Ste. Croix, which it retained for less than a hundred years, till in 1617 the Recollet Fathers of Quebec rechristened it the St. Charles.

In the whole of Cartier's story there is no trace of any origin for the name by which the place he had now reached is known to us. He calls it simply Stadacona, and it is evident that he never attempted to give it any other appellation. The story of his sailors crying out "Quel bec!" and their exclamation being repeated until it came to be used as the name of the cliffs which caused it, is never hinted at. Indeed, after many attempts to find a Canadian origin for the name of Quebec, one is obliged to confess that the question remains as much unanswered as ever. Charlevoix says that the word is Algonquin. "Les Abenakis, dont la langue est une dialecte Algonquine, le nomment Quelibec, qui veut dire *ce qui est fermé*, parceque de l'entrée de la petite rivière de la Chaudière par où ces sauvages venaient à Quebec, le port de Quebec ne paroît qu'une grande barge." But, on the

other hand, when we remember that Quebec is an old form of the word Caudebec, it seems probable that the French did really give the name, though after the time of Cartier. The Earl of Suffolk of Henry VI.'s reign bore the titles of *Domine de Hamburg et de Quebec*. He was a powerful seigneur in Normandy, and the same place may easily have given him his title and the gem of La Nouvelle France its name. In the time of Cartier, however, the Quebec of to-day was certainly called Stadacona, and was a populous and prosperous Indian town.

No sooner were his ships safely anchored than the captain went on shore to return the visit he had received from the Indian chief. "Near the river," he says, "there is a people of whom Donacona is chief, and their dwelling is called Stadacona, which is as beautiful a place as it is possible to see, and very fertile—full of fine trees the same as in France, such as oaks, elms, ashes, walnuts, maples, vines, whitethorns which bear fruit as large as damsons, and other trees; under which grows fine hemp as good as that of France, without any cultivation." Kindly received by the Indians, and guided up steep pathways to the rugged heights where the citadel now stands, Cartier, first of Europeans, looked down upon one of the most magnificent landscapes in the world. That grand panorama is Nature's own, and must have been in its outlines the same to his eyes as it is to ours. At his feet the cliffs, sharply cut by some long past convulsion, formed a precipitous wall 200 feet high, at whose base clung the narrow strip of beach, then green and fertile, but now covered by Champlain Street, and the wharves and warehouses of the Lower Town. Beyond this line of beach stretched the glorious waters of "the great river," cradling the green Ile d'Orléans, with its abundant foliage, where, perhaps, the golden touches of autumn had already given their first splendor to the vines. On his right, parted from him by the broad current, rose the broken Point Levi shore, a wild wooded solitude, "very fair," but seemingly undisturbed by man. On his left the shallower stream of the Ste. Croix flowed peacefully out from a channel already far too wide for its waters, and

there his ships, with the royal arms of France displayed, lay safely—a little stronghold of European power and civilization in the midst of the primitive region. Beyond the ships a grassy and level shore extended, until, rising gradually, it grew into those steep cliffs fringed with clinging bushes, over which, six miles off, the Montmorenci flung itself, marking its descent by a cloud of glimmering whiteness. Farther on and farther back from the river the land still rose, richly wooded and beautiful, but all solitary, where in later days Wolfe's little army was to have its encampment, and where now scattered villages lie, stretching mile after mile past the place where the white houses and glittering spire of Les Anges Gardiens nestle among the green slopes of the hills.

It must have been a day never to be forgotten when Cartier—surely for a moment unconscious that his voyage needed any other perfecting—climbed the heights of Stadacona and looked down upon this picture. He was to grow familiar with it, to see it daily through times of difficulty, danger, and almost despair; but for all the suffering that might come to be associated with it, it would keep its place in his memory as something to be recalled in the peaceful years to come with all a lover's admiration and a discoverer's pride.

A short time was spent in exploring the neighborhood of Stadacona and the Ile d'Orléans (on which, from its abundant vines, the name of Ile de Bacchus was bestowed) and in taking measures for the safety of the ships; but the captain's mind was now resolutely bent on a voyage up "the great river," to visit an important Indian settlement of which reports had reached him. The chief and people of Stadacona were for some reason opposed to this expedition, and not only contrived causes of delay, but finally managed so that the French were obliged to do without the guides and interpreters on whose help they had counted. Cartier, however, was not to be discouraged; and on September 19th started up the river with the Emerillon, the smallest of his three small vessels, and two boats. They stopped at a place called Ochelay, which seems to have been at or near Richelieu, and were

hospitably received by the Indians there. When they reached Lake St. Peter their journey began to be troublesome and dangerous, and they were obliged to leave the Emerillon in charge of a small party, and only take on the boats, manned by twenty sailors, four gentlemen volunteers, and the two masters Marc Jalobert and Guillaume le Breton. They had heard from so many quarters a report of the importance of Hochelaga, whither they were bound, that it must have been with no little eagerness that they pushed their way on through the islands at the head of the lake, and at last, on October 2d, came in sight of their destination.

The news of their approach had gone before them, and there was an excited crowd waiting as their boats drew up to the beach. More than a thousand persons, Cartier says, were assembled, dancing and singing tumultuously, and throwing cakes made of maize into their boats in such abundance "that you would have thought they were rained down from heaven." As soon as the strangers landed they found a great feast prepared for them, the whole town apparently constituting themselves their entertainers; but that day there was no state reception, nor did they visit the town itself, contenting themselves with making friends of the crowd, and especially of the women, who seem to have been everywhere most prominent in public demonstrations.

Next morning the captain and his company started, with a certain state and formality, for the town or "bourgade," as he calls it, of Hochelaga. They found the approach to it formed by a good and well-trodden road, which passed through a country of great natural beauty, well wooded, and evidently fertile. Oaks, maple, and other valuable trees grew abundantly, and as they proceeded, fields of Indian corn began to spread out around them. In the midst of these fields, surrounded on all sides by the ripening harvest, rose the walls of Hochelaga. Above the town a beautiful hill sloped up, sheltering it toward the north, and in front flowed the great river, an expanse of nearly two miles of swift blue water, contrasting with the green shore. As they drew near the town a chief, attended by a

number of people, came out to meet them, and invited them to sit down and rest in the place where they then were. When they had done so the chief began the invariable oration, "preschement" of welcome, of which little, if any, could have been intelligible; for, supposing, as seems evident, that the French had learned something of the language spoken at Stadacona, they would now find themselves in the region of a different (probably a Huron) dialect.

When the "preschement" ended Cartier presented to the chief gifts suitable to his rank—two hatchets, a pair of knives, and a cross, which he was instructed to kiss and to hang round his neck. Then the party went on through the fields, passing among the tall stems of Indian corn with their graceful leaves and long tassels of golden-tinted floss, until they reached the gate of the town and entered it, much amazed at what they saw; for they found themselves within a circle of large extent, formed by wooden ramparts and broken by only a single entrance. These ramparts were triple, and most strongly and ingeniously built—very thick at the bottom and diminishing toward the top, the beams extremely well joined, and each rampart two spears' length in height. The gateway, the only passage through them, could be closed with bars against an enemy, and all around the town inside the ramparts ran galleries, where piles of stones were stored ready to be thrown on the heads of a besieging army. Within all these fortifications were about fifty houses arranged round a central square or place. Each house was about fifty feet long, cleverly roofed with sheets of bar, and containing one large hall with a fireplace, and several smaller rooms for the use of different members of the family. An upper story served as the granary and storehouse: the supplies which it held consisted of Indian corn (which was beaten into flour with wooden mallets), pease, large cucumbers, and fruits, with abundance of dried fish. Cartier tells us nothing as to the furnishing of these substantial dwellings, though their comfortable aspect seems to have much impressed him, except as to the beds, which were made of bark with plenty of furs for coverings.

The French were led by the chief,

their conductor, into the great central square of the town, being joined by a crowd of the inhabitants, women as well as men. All these came round them without the least sign of fear or shyness, caressing them, the former bringing babies, whom they begged them to touch, as if they thought their doing so would procure the children some good fortune. At last, after the women had gratified their curiosity, they were all dismissed by the men, who seated themselves on the ground. Presently, however, some of the women came back bringing mats, which they arranged in the centre of the square, and invited the captain and his party to take their places upon them. They had no sooner obeyed than the Agouhanna, the great chief, made his appearance, carried by nine or ten men, and placed himself on a deer-skin beside that assigned to Cartier. He was a man of about fifty, no better dressed than his subjects, except that he wore as a crown a fillet of hedgehog's skin, dyed red; he was, however, a most pitiable object, being so palsied that all his limbs shook.

The scene that follows is so singular and so touching that one stops to ask one's self what it was in the aspect of the strangers which thus inspired in a people, not altogether barbarous, a faith equally sudden and unclaimed? They had seen no proofs of their power. Even the firearms which had awed the people of Stadacona had not been used here to obtain for the French a prestige born of fear. They knew still less, one would think, of the disposition of the new-comers—whether they would show themselves gentle or cruel. Yet they evidently believed at once in their will, as well as in their capacity, to help. Was it one of those intuitions which we see sometimes in children by which they comprehend character as it affects themselves with an almost unerring certainty?

The chief of Hochelaga only waited until the usual ceremonies of greeting and welcome were ended, and then immediately showed his disabled limbs to the captain, begging him to touch them. He did so, rubbing them gently with his hands, and the chief, apparently satisfied, took off the red fillet and presented it to him. As if this gift had been a

signal expected and waited for, a strange stir instantly began, and there was carried into the square from all sides a crowd of sick, helpless, blind, and deformed persons who were laid down round Cartier, their friends praying him only to touch them—"tellement qu'il sembloit que Dieu feust là descendu pour les guerir."

Never, surely, since the days when the lame, the halt, and the blind were brought to our Lord was there a similar throng assembled, and it was well for the man who stood there with so many imploring eyes turned to him that he could feel, above his human weakness, the certainty of a Divine power and compassion. Deeply moved, he took, as it were, these ignorant prayers of the people and offered them to God. Standing in the midst, he recited the beginning of St. John's Gospel, and making the sign of the cross upon the sick, prayed that God would make Himself known to them, and give them grace to receive Christianity and the holy rite of baptism. Then he took a Book of Hours, and read distinctly from it, word for word, the Passion of our Lord. While he thus read words which, though in an unknown tongue, they must have guessed to be in some way Divine, the people stood around him silent, looking up to heaven and imitating reverently the devout gestures of the French.

Did any miracle of healing follow? We know nothing more. Cartier's narrative goes back to common things, and tells us briefly of the rest of his hurried visit to Hochelaga. Yet it is hard to believe that such an hour left no trace. Even those who refuse belief, absolutely and without exception, to all modern miracles, may allow that among a people highly imaginative and full of faith cures of nervous diseases were, under such circumstances, very possible; to those less sceptical it may be permitted to hope that even more than such cures took place. One thing can hardly be doubted. The recollection of that appeal and response—the cry of human misery answered by the message of Divine love—must have left an undying impression on the minds of those who saw and heard; and probably the recital of this scene was one of the first inducements to pious men and women in

France to undertake the long and difficult task of evangelizing the people of Canada.

Cartier and his party explored the environs of Hochelaga, and climbed "the mountain" to which later travellers gave the name of Mont Royal; but the season was advancing, and they could make no long stay. Taking a warm and friendly farewell of their Indian hosts, they went on board their boats, and soon rejoining the Emerillon, returned to Stadacona by the middle of the month.

Much had to be done before winter set in, and strange must have been the feelings of the little colony when, shut up in the inclosure with which they had surrounded their ships, they saw the great river change into a plain of ice, and the green and fertile country shroud itself in its deep mantle of snow. They knew that for six months they must remain prisoners, but they did not know all the suffering those winter months were to bring. The captain's journal through the winter is a story of simple heroism full of interest, but for which we have no space here. A terrible illness broke out among the party, which proved fatal to twenty of them, and was so universal that at one time there were but three men well out of the three crews. At the same time the friendship of Donacona and his people had so far cooled that Cartier felt it most imperative to conceal the helpless condition of his men, and was driven to all sorts of expedients for this purpose, while his heart was torn by the misery about him, and often, as De Joinville says of St. Louis, "he had nothing but courage to maintain life."

At last the time of suffering was over. A decoction of a plant called *anneda*—perhaps the wild barberry—proved so efficacious that the sick began quickly to recover. One of the ships must indeed be abandoned, but the others were brought out of their inclosure and made ready for sea. Early in May all was prepared, but Cartier seems to have feared that Donacona and his people meant to hinder his departure. They had shown great distrust of the French for some time, and this is the only excuse for what certainly was a line of conduct entirely at variance with the captain's general character. Donacona

was suddenly seized, and, with several of his attendants, forcibly invited to pay a visit to the king of France. He was allowed to see and speak with his people, and to appoint a regent, but, nevertheless, there is no doubt that he was carried off against his will. On May 6, 1536, the two ships left their anchorage and moved down the river, and on June 6 they came safely into the harbor of St. Malo, the joy of their prosperous home-coming clouded by the memory of twenty comrades who would never return.

Four years later Cartier once more sailed for "La Nouvelle France." The interval had been filled by public events of such importance as to distract King Francis's thoughts entirely from his newly-claimed territory, and had been marked also by the downfall of Admiral de Chabot, Cartier's friend and patron. At last, however, a fresh commission was issued (and this time expressly for purposes of colonization), in which, unfortunately, Cartier was hampered by the partnership of the Sieur de Roberval. De Roberval made so many delays that Cartier was at last ordered off alone, and ill provided. He reached his old anchorage at the Ste. Croix August 23, 1540, and though he had not brought Donacona or any of his attendants back, he was again well received by the Indians. He afterward began preparations for a settlement at Charlebourg Royal (Cap Rouge) and built a fort, where he must have spent the winter and part of the following summer. All this time De Roberval was expected in vain, and when autumn approached the patience of the adventurers seems to have been worn out. They left the great river for the last time, met De Roberval at St. John, but would not turn back, and before the end of October had been received with great rejoicings and honors in their own town. Only the first part of this voyage is related by the captain himself; his journal breaks off abruptly at a moment when, just at the closing in of winter, he was putting his little fort in order to withstand an anticipated attack. If he finished it (which is almost certain), the last portion was entirely lost within a few years of his death, and Hakluyt, who tried anxiously, but in vain, to recover it, was able to pick up

only the most fragmentary information as to later events.

For ten years "the Captain" seems to have enjoyed quiet and modest ease in his seaside Manoir of Lemoilou. The king gave him letters of nobility, but apparently little or nothing else; and after De Roberval's return to France there was even a question raised as to the expenditure of the sum granted to them jointly from the royal treasury. It

was proved, however, that Cartier had spent more than he had received, and the court gave sentence in his favor in June, 1544. This is the latest public record of his life. In 1554 he died, at the age of sixty, leaving no children and no wealth—nothing at all, indeed, except his well-deserved reputation as a skilful sailor, an excellent commander, and an honest man.—*Fraser's Magazine*.

THE POETRY OF SLEEP.

POPE says somewhere that he cannot sleep without a poem in his head, and elsewhere observes, with some inconsistency, that verses throng into his mind and keep him awake in spite of the drowsy influence of lettuce. It seems probable that poets, as a rule, have suffered a good deal from the infliction of thick-coming thoughts which banished slumber. Certainly many of them have propitiated sleep with song, and it may be not uninteresting to examine a few of the votive poppy-wreaths laid on the altar of slumber. For beauty and brevity of expression there is nothing in literature more remarkable than the single line of the Psalmist, "He giveth his beloved sleep." Five words contain all that Mrs. Browning has expanded into a long piece of verse, chiefly memorable for the recurrence of the ancient refrain. But if a sleepless man would propitiate the God of Rest, there is no better inscription for the altar of Morpheus than the speech of Hera in the Fourteenth Book of the "Iliad":

Ἦπνε, ἀναξ πάντων τε θεῶν πάντων τ'
ἀνθρώπων,
Ἡ μὲν δὴ ποτ' ἐμὸν ἔπος ἔκλυες, ἦδ' ἔτι
καὶ νῦν
Πεθεῖν ἐγὼ δέ μ' ἐ τοι ἰδέω χάριν ἡμᾶτα
πάντα.

"Sleep; King of all gods, and of all mortals, hearken now, prithee, to my word, and, if ever before thou didst listen, obey me now, and I will be grateful to thee all my days." The whole passage is one of singular grace and sweetness. Sleep is conceived of by the poet as a young god the lover of Pasithea, one of the fairest of the Graces. Hera goes to seek his aid, and meets him wandering through the dreaming town of Lemnos.

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By the promise of Pasithea's hand, she bribes him to lull Zeus into forgetfulness. Sleep changes himself to the shape of a bird, probably a night-bird, and conceals himself in the boughs of a great pine tree on Ida. The clearness of Homer's vision is very remarkable; living in an age when the art of sculpture was at its rude beginnings, the poet conceives of Sleep no less distinctly than did the sculptor who, centuries later, wrought the bronze head of Hypnos now in the British Museum. The face is a beautiful one, innocent and drowsy, and the soft, noiseless wings of a night-bird are fitted to the head. There is something delicate and caressing in the epithets which Homer, and after him the other Greek poets, apply to Sleep. He is "sweet Sleep," sweetest, as Odysseus found on board the Phæacian bark, when "most like to death;" "then fell delicious Sleep upon his eyelids, Sleep unbroken, the sweetest of all, and the nearest kin of Death." Here the thought of Homer touches that of Socrates, who observes in the "Phædo" that men's happiest moments are passed in sleep so sound that consciousness is utterly lost and undisturbed even by dreams. Probably the Greeks did not suffer much from *insomnia*. Nerves had not been invented, and people lived almost entirely in the open air. A comic character in Aristophanes was kept awake, indeed, by insects which still make night hideous in modern Greece. The two old fishermen in Theocritus could not sleep soundly, because they were half starved. We must go as far as the feverish life of imperial Rome to find, in Mæcenas, a statesman as sleepless as Prince Bismarck. The Greek

poets, in general, think of sleep as the natural and pleasant occupation of free-men in the summer noons, when the citizens would leave the towns to lie on grass "more soft than slumber," within hearing of the murmur of waters and of the bees in the lime trees.

The poets of the middle ages were obliged to feign a want of sleep, whether they felt it or not. It was part of their machinery to begin a poem by pretending that, after long lying sleepless, they arose and wandered into a wood, where they met many a fairy vision. Yet Chaucer gives a very truthful description of what the late Mr. Charles Collins, in the "New Sentimental Journey," called "the bad night candid," when you not only cannot sleep, but are well aware of the hopelessness of the effort:

As I lay in my bed slepe full unmete
Was unto me, but why that I ne might
Rest I ne wis, for there n'as erthly wight,
As I suppose, had more of hertis ese
Than I, for n'ad sicknesse nor disese.

Of all invocations of sleep the most famous is probably that of the wakeful usurper in *Henry IV.*:

O sleep, O gentle sleep,
Nature's soft nurse, how have I frighted thee.

No poet, however, has observed the phenomena of a coy and hesitating sleep more closely than the old French writer, Pontus de Tyard. He appeals to sleep as the lord of all the army of phantasms that flit before the drowsy, but not yet unconscious, brain, and appear to be dreams in the making:

Come, Sleep, and cast thy wings about my
head,
And thine own temples shall be garlanded
With drowzy poppy-leaves and labdanum.

The most pathetic lines on sleep are those of Scarron's self-made epitaph. The sick jester was sleepless for many nights before his death, and looked impatiently, as he says in the lines which we quote in an English version, for his dreamless repose:

Wayfarer, be thy footsteps light,
I pray you that ye make no sound;
Here, this first night of many a night,
Poor Scarron sleeps—in holy ground.

The translation, as usual, is treacherous. Scarron says nothing about "holy ground":

Passant, ne fais ici de bruit,
Garde bien que tu ne l'éveilles,
Car voici la première nuit
Que le pauvre Scarron sommeille.

The thought already existed in a briefer shape:

Hic quiescit qui nunquam quievit, tace!

It is in modern poetry—poetry of the age of nerves, anodynes, anæsthetics—that sleep, as might have been expected, is most frequently and piteously invoked. There is something practical and like the man in Wordsworth's famous sonnet which enumerates all the spells by which, through three long nights, he has summoned sleep in vain. He has counted visionary sheep, and has thought of all monotonous and slumbrous sounds and sights, but he is wakeful as ever, and nervously watches for the moment when the birds will disturb him with their intolerable songs. A poet of the Greek anthology had the same apprehension of the swallow's shrill morning chirp:

No more for my Rhodanthe would I weep,
But rest awhile with poppied lips, if ye,
O twittering swallows, would but let me be,
Nor dart below my eaves with maddening
cheep.

So says Rufinus, as Englished by Mr. Gosse. No one has said better things about sleep than Coleridge. "Sleep, the wide blessing," a half-line from the verses on "The Pains of Sleep," has an epic breadth. In contrast with these stanzas the Ancient Mariner's blessing on sleep seems to exhaust the subject:

Oh, sleep! it is a gentle thing,
Beloved from pole to pole!
To Mary Queen the praise be given!
She sent the blessed sleep from heaven
That slid into my soul.

* * * * *

I moved, and could not feel my limbs;
I was so light—almost
I thought that I had died in sleep
And was a blessed ghost.

Among lullabies we might praise the drowsy cadence of a modern Greek cradle-song, and this sleepy chant that lulls the peasant children in France:

Passez, la dormette,
Passez par cheux nous,
Endormir gars, fillettes,
La nuit et le jour.

La Dormette is a mythical character, a

good old fairy, who is supposed to wander in the dusk, scattering an invisible powder on the sleepy eyes of children. Blake's cradle-song is very pretty, but rather too long, and not too grammatical in the later verses :

Sweet dreams, form a shade,
O'er my lovely infant's head ;
Sweet dreams of pleasant streams
By happy, silent, moony beams.

Sweet sleep, with soft down
Weave thy brows an infant crown ;
Sweet sleep, angel mild,
Hover o'er my happy child.

There is something of the disconnected coherence of the visions of the night in Beddow's "Dream Pedlary," which reads like a memory of a poem heard in sleep :

If there were dreams to sell,
What would you buy ?
Some cost a passing bell ;
Some a light sigh,
That shakes from Life's fresh crown
Only a rose-leaf down.
If there were dreams to sell,
Merry and sad to tell,
And the crier rang the bell,
What would you buy ?

But a sleepier and more soothing song than this is Sydney Dobell's chief success in verse, a passage of drowsy and monotonous music that rings

On the margin grey
'Twixt the soul's night and day,
Singing awake away
Into asleep.

Probably a wider research than we have made would discover many more lullabies and songs of sleep, which might make a charmed volume for wakeful eyes. Mr. Tennyson's cradle-song in "Sea Dreams," and the verses from the "Princess,"

Now sleeps the crimson petal, now the white,
with the languid choral music of the

"Lotus Eaters," should not be omitted. Shelley's poem, "The Magnetic Lady to her Patient,"

Sleep on, sleep on ! Forget thy pain,
My hand is on thy brow,

would try the force of its mesmeric spell. Shelley's poem on Night, too, might claim a place in a volume of lullabies for grown-up children by virtue of its lines,

Thy brother Death came and cried,
"Wouldst thou me ?"
Thy sweet child Sleep, the filmy-eyed,
Murmured like a noontide bee,
"Shall I nestle near thy side ?
Wouldst thou me ?" and I replied,
"No, not thee !"

Filicaja's ode must not be forgotten, nor Cowley's, nor Denman's song in "The Sophy." But Keat's sonnet may close the list of invocations which Homer made Hera begin :

O soft embalmer of the still midnight !
Shutting, with careful fingers and benign,
Our gloom-pleased eyes embower'd from the light,
Enshaded in forgetfulness divine :
O soothest Sleep, if so it please thee, close,
In midst of this thine hymn, my willing eyes,
Or wait the amen, ere thy poppy throws
Around my bed its lulling charities ;
Then save me, or the passed day will shine
Upon my pillow, breeding many woes ;
Save me from curious conscience, that still lords
Its strength for darkness, burrowing like a mole ;
Turn the key deftly in the oiled wards,
And seal the hushed casket of my soul.

In spite of Keats, and of the proverb about the sleep of the just, we fancy that conscience keeps few people awake. Coffee, and overwork, and tobacco, and the noises of the night may demand chloral, but not conscience. Men have lain awake, and the night has fretted them, but not for conscience.—*Saturday Review*.

THE IRISH LAND LEAGUE AND ITS WORK.

BY T. P. O'CONNOR, M.P.

THE problem by which the founders of the Land League were confronted in the early part of 1879 was no new one in the history of the Irish Land Question, for famine has been periodic

among the Irish tenantry. The latest epoch of famine was in the years 1846 to 1849. To understand the movement of to-day, it is necessary to understand the meaning of the events in these

years; for it was the lessons of 1847 and 1848 which taught the agitators of 1879 and 1880; their judgments were formed, their proposals were regulated, their acts must be judged, by the occurrences in that period. It was that epoch which showed to them the meaning of a famine in Ireland; from that epoch they also learned what, in a period of famine, the action of Irish landlords might be expected to be; from that epoch also they could forecast the fate of Irish tenants, should a similar catastrophe place the tenants in similar circumstances.

The Land Leaguers, therefore, in asking the consideration of their case, have a right to make it a primary demand that their judges shall be possessed of the events and lessons of the Great Famine. I cannot within the space at my disposal attempt to give anything like a complete picture of that time; and I must therefore attempt, by the mention of some statistics, and of a certain number of characteristic incidents, to bring something like a conception of the calamity to the English mind. The first great fact as to that period is the diminution in the population. In 1841 the inhabitants of Ireland numbered 8,175,124; in 1851 the population was 6,552,385; that is to say, the population had in this period diminished by about a million and a half. Even these figures do not, however, represent the full extent of the carnage. The famine did not begin till 1846; the population accordingly had gone on with the natural increase until 1846; and when the famine began the population would be about 8,750,000. Again, with but the intervention of the famine, and allowing for natural increase, the population in 1851 would have been something above nine millions. The work of the famine then was that a country which should have had a population of nine millions in 1851, had in reality a population of six millions and a half. The loss in population was two millions and a half. Let us take another great and guiding fact—the number of inhabited houses. The total in 1841 was 1,328,839; and in 1851, 1,046,223.

And now for a few of the incidents of the time. There were 174 deaths in Cork Workhouse in a single week, being

at the rate of more than one death an hour.* Mr. James H. Tuke tells of an inspector of roads who caused no less than 140 bodies to be buried, which he found scattered along the highway in Clifden, County Galway.† Deaths by famine had become so common by the end of February, in 1847, that at a meeting of coroners in Cork it was resolved to hold no more starvation inquests.‡ It was quite an usual thing to find entire families swept away, and the dead and the dying often lay together for days in the same cabin. At a place called Cool-dorahey a young fellow named Manley was found dying, with his brother and sister lying close beside him, the last of a large family; the sister had been dead for five, the brother for three days.§ Lord George Bentinck, in a speech in the House of Commons, mentioned a case in which in one cabin ten corpses were found out of a family of eleven; and another case in which seven putrid corpses were found in the same hovel.|| The supply of coffins proved utterly unequal to the demand. In Roscommon, where whole families retiring to rest at night alive were found all dead in the morning, sixty bodies were within a short time buried without coffins.¶ A newspaper correspondent, writing from Dingle, in Kerry, speaks of a parish of three thousand souls, of whom five hundred had perished in six months. Three fourths of them were interred coffinless; "scores of them thrown beside the nearest ditch, and there left to the mercy of the dogs, which have nothing else to feed on."** In other parts of the country the difficulty was met by a singular expedient: coffins were made with a slide or hinged bottom, and so did duty for several corpses in succession.††

These few incidents, selected out of many thousands, are sufficient to give the reader an idea of what the great famine in Ireland meant to the Irish tenants; the next point to be considered

* O'Rourke's "History of the Great Irish Famine of 1874," p. 369.

† "A Visit to Connaught in the Autumn of 1847." By James H. Tuke, p. 8. Quoted by O'Rourke, pp. 384-5.

‡ *Ibid.* p. 385.

§ *Ibid.* p. 344.

** *Ibid.* p. 409.

§ *Ibid.* p. 369.

¶ *Ibid.* p. 380.

†† *Ibid.* p. 401.

is the action of the landlords during that period. In the year 1847, according to a report drawn up by Captain Larcom, afterward Under-Secretary for Ireland, 70,000 occupiers were evicted—that is to say, about 300,000 persons.* In 1849 there were, according to the late Mr. Kaye,† 50,000 evictions; and in the four years following the famine—from 1849 to 1852—there were, according to a table in Mr. J. C. Morison's excellent pamphlet, "Irish Grievances," 221,845 evictions.‡ Sir Charles Wood, in a speech in the House of Commons, called attention to the circumstance that the landlords in Mayo were evicting as they never evicted before, in proof of which he announced the fact that out of 6400 processes at the Quarter Sessions in Ballina, 4000 were at the suit of landlords for arrears of rent. These proceedings had almost depopulated whole districts, and town lands which had been held by 400 or 500 persons were then uninhabited.§ Mr. O'Rorke quotes a placard, posted in the town of Cahir, in April, 1846, to the effect that if "all rent and arrears of rent due to the 25th of March" were not paid on the 12th of May, "the most summary steps will be taken to recover the same." This is signed by "John Chaytor," agent to the Earl of Glengall. "Symptoms of a widespread systematic extermination," says another authority, "are just beginning to exhibit themselves. . . . The potato cultivation being extinguished, at least for a time, the peasant cultivators can pay no rents; sheep and horned cattle *can* pay rents, and smart rents too; therefore the sheep and cattle shall have—the lands, and the peasants shall be ousted from them; a very simple and most inevitable conclusion, as you will see. . . . I repeat it, a universal system of ousting the peasantry is about to set in. . . . The number of civil bills served by landlords for the approaching Sessions of this town will treble those sent out for the last ten years."|| Father

O'Rorke, having quoted his authority, goes on to tell that he visited the districts described twenty years after. "I had a conversation," he writes relative to the famine, "with a gentleman who knew the midland counties, and portions of the west, well. I asked him what was the effect of the famine in his district. 'My district,' he answered, 'was by no means regarded as a poor one, but the famine swept away more than half its population. The census of 1841 gave the families residing in it as 2200; the census of 1851 gave them at 1000.' 'Did the landlords,' I inquired, 'come forward liberally to save the lives of the people?' 'Only one landlord,' he replied, 'in the whole locality with which I am connected did anything to save the people, F—— O'B——. He asked no rent for two years, and he never afterward insisted on the rent of these two years, although, I must say, he was paid it by many of his tenants of their own free will; but, for the rest, he cancelled those two years' rent and opened a new account with them, as with men owing nothing.' 'And what,' I further asked, 'were the feelings of the landlords with regard to their tenants dying of starvation?' He answered, with solemn emphasis, '*Delighted to be rid of them!*'"¶

Here is another case. The Rev. B. Durcan, P.P., of Swinford, writing on November 16, 1846, on the condition of his parish, says:

"One word as to the landlords. There are several owners of land in this parish (Kilconduff), but not one of them resident. We made an effort to create by subscription a fund for the purpose of keeping a supply of provisions in Swinford, to be sold in small quantities. The non-resident landlords were applied to, but not one of them responded to the call. They are not, however, idle. Their bailiffs are on the alert distraining for rent, and the pounds are full."†

In County Sligo Father O'Rorke tells of a case where thirty families were evicted by one landlord—one hundred and fifty individuals in all.‡ In the second year of the famine corn was distrained in October for rent which fell due in the following May.§

There was one case of eviction, how-

* Quoted in Mitchel's "History of Ireland," vol. ii. pp. 451-2.

† "Free Trade in Land," p. 305.

‡ "Irish Grievances," p. 55.

§ Quoted in O'Rorke, p. 355.

|| A correspondent of the *Freeman's Journal* quoted by O'Rorke, p. 386.

* Father O'Rorke (p. 389) himself emphasizes these last words.

† O'Rorke, p. 265.

‡ *Ibid.*

§ *Ibid.*

ever, which exceeded all the rest in the harshness of its circumstances, and which excited the greatest attention. This was the eviction in the village of Ballinglass, County Galway. The landlords were a Mr. and Mrs. Gerard. In this case no rent at all was actually due, and the tenants had over and over again offered to come to terms. Fixed in their determination to be rid of the villagers, Mr. and Mrs. Gerard refused all offers; and on Friday, the 13th of March, the sheriff, accompanied by a large force of the 49th Regiment, and by a heavy body of police, carried out the decree. Sixty houses were destroyed; one was left standing in which were lying a man and woman who were ill of the fever, and they shortly afterward were served with notice to leave the place within fifteen days, "or the house would be tumbled on top of them."* Only a portion of the walls were pulled down in the first instance; and the villagers, pitching a few poles slantwise against these walls, took shelter there. The next day the bailiffs came, pulled down all the walls, and rooted up the foundations. The tenants then took refuge in the ditches, "where they slept in parties from ten to fifteen each, huddled together before a fire, for the two succeeding nights."† One other incident. A tenant—he was nearly eighty years of age, and had lived in the village of Ballinglass for over sixty-eight years—was, to use a modern word, "interviewed;" and two questions, with their answers, will sufficiently indicate the nature of this old man's story:

"'Is it true,' asked the correspondent of the *Freeman's Journal*, 'that the remainder of the walls were ordered to be thrown down to prevent the people sheltering themselves at night?' 'In troth it is, sir; they would not let any one go near the place; we slept in the ditches for two nights, and I got pains in my poor old bones after it.' 'Did the women sleep in the ditches?' 'They did, sir, and I saw one of the women with a child on her breast hunted by the bailiffs from three places, the night after they threw down the houses, when we were under the walls, and they came to put out the fires, and they put out the fires in the road ditches on us too.'‡

* *Freeman's Journal*, quoted in *Dublin Nation*, March 28, 1846.

† *Ibid.*

‡ *Ibid.*

One other point must be noticed.* The emigration between the years 1842 and 1851, both inclusive, amounted to 1,436,862. Quoting the "Irish Crisis," by Sir Charles Trevelyan, Father O'Rorke calculates that the deaths on the voyage to Canada rose from five in the thousand (the ordinary rate) to about sixty in the thousand, and while the ships were in quarantine they rose from one to forty in the thousand; so that, instead of six emigrants in the thousand dying on the voyage and during quarantine, one hundred died, "besides still larger numbers who died at Quebec, Montreal, and elsewhere in the interior."† Out of 89,738 emigrants who embarked for Canada in 1847, Father O'Rorke calculates that 15,330 died on the voyage or afterward in hospital.‡ Of 493 passengers who sailed in the *Erin Queen*, 136 died on the voyage; of 552 in the *Avon*, 246 died; of

* Since writing the preceding paragraph in reference to the Ballinglass eviction, I have come across accounts of cases of equal atrocity. One of these attracted considerable attention in Parliament, and even excited the disgust of so staunch a friend of the landlords as Sir Robert Peel. The hero of this eviction—of which County Galway was also the scene—was a Mr. Blake, a magistrate. Sir R. Peel quotes the following account of the proceeding from Major McKie, an official employed by the Poor Law Commissioners:

"It would appear, from the evidence recorded, that the forcible ejectments were illegal; that previous notices had not been served; and that the ejectments were perpetrated under circumstances of great cruelty. The time chosen was for the greater part nightfall, on the eve of the new year. The occupiers were forced out of their houses, with their helpless children, and left exposed to the cold on a bleak western shore in a stormy winter's night; that some of the children were sick; that the parents implored that they might not be exposed, and their houses left till the morning; that their prayers for mercy were vain; and that many of them have since died. I have visited the ruins of these huts (not at any great distance from Mr. Blake's residence); I found that many of these unfortunate people were still living within the ruins of those huts, endeavoring to shelter themselves under a few sticks and sods, all in the most wretched state of destitution; many were so weak that they could scarcely stand when giving their evidence. The site of these ruins is a rocky, wild spot, fit for nothing but a sheep walk."—*Hansard*, 3 S. xcvi. 1009.

† "Irish Crisis," quoted by O'Rorke, p. 497.

‡ O'Rorke, p. 497.

476 in the *Virginus*, 267 died on the voyage; and Mr. William Henry Smith, C.E., an English gentleman, in a pamphlet entitled "Twelve Months' Residence in Ireland During the Famine and the Public Works," states that of 600 who emigrated in one vessel, not 100 survived.* Lord Lansdowne, grandfather of the present peer, was one of the most ardent supporters of the system of forced emigration. So many of his tenants whom he sent abroad in these times perished, that a portion of a hospital in America was known by the name of the Lansdowne Ward.

One fact, finally, by way of showing the combined results of famine, pestilence, and evicting landlords during the famine years. The number of peasant cabins in 1841 was 491,278, in 1851 the number was 135,589. In Connaught, where famine, pestilence, and eviction raged most severely, the number of cabins fell from 121,346 in 1841 to 31,586 in 1851.†

With these facts before them, the Land Leaguers were entitled to draw three conclusions: (1) That the failure of the potato crop in Ireland was likely to lead to a famine, and that the proportions of a famine must in Ireland be gigantic; (2) That famine would lead to equally destructive pestilence; and (3) That the landlords would take advantage of the famine and pestilence to push the most extreme assertion of their rights.

The first thing the Land Leaguers are bound to show is that, at the moment they began their operations, there was reasonable ground for anticipating a famine. The following official statistics supply the best answer to this question:

POTATO CROP.

Year.	Estimated Produce.	Estimated Value.
1876. . . .	4,154,784 tons. . . .	£12,464,382
1877. . . .	1,757,275 "	5,271,822
1878. . . .	2,526,504 "	7,579,512
‡ 1879. . . .	1,113,676 "	3,341,028

I might, in addition to these figures, quote the reports of the Duchess of Marlborough and the Mansion House

Relief Committee, which teem with descriptions of a state of destitution which may be well called appalling; but I can safely rest the case on the figures with regard to the potato crop.

What do those figures show? That in three years there was a loss in the potato crop alone of £10,000,000; and the annual tenement valuation of Ireland is but one million more—namely, £11,000,000. Further, this table shows that the potato crop of the year 1879 was but one third of what it was in the year 1876. It must be remarked that in some districts the potato crop was not even one third; it was totally destroyed. As the potato is the chief, if not the only food of the Irish tenants, it follows that in parts of Ireland the tenants were left absolutely without food. These facts justify the anticipation of the Land Leaguers that a famine was imminent.

The next proposition the Land Leaguers have to prove is that the landlords of 1877 to 1879 were animated by the same spirit as the landlords in the years between 1846 and 1849. Again, official statistics supply the answer to this question:

Year.	No. of Ejectment Processes.
1876.	1269
1877.	1323
1878.	1749
1880 (Estimated Number in)	3893*

This table speaks for itself: as in the years of the Great Famine, so in the present epoch of distress, the landlords increased the number of evictions in exact proportion to the increase of distress among the tenants.

This extraordinary fact was one of the chief reasons, as they themselves avowed, why the Government introduced the Disturbance Bill, and it was made the subject of frequent comment in the ministerial speeches. Thus, Mr. Gladstone, speaking on the second reading, sued these words:

"The two bad harvests of 1877 and 1878 were succeeded in 1879 by a harvest which in parts of Ireland was the very worst known since the Great Irish Famine. With these bad harvests the number of evictions increased. In truth, the act of God in the failure of the crops had replaced the Irish occupier in

* O'Rorke, p. 499.

† Thom's Almanac.

‡ Quoted from a speech of the Attorney-General for Ireland on the Disturbance Bill (*Hansard*, 3 S., ccliii. p. 1, 160).

* There are some later statistics, I believe, with regard to 1879, but I have not been able to obtain them.

that condition in which he stood before the Land Act, because he was deprived of his usual means, and had to contemplate eviction for non-payment of rent, and, as the consequence of eviction, starvation. It is no great exaggeration to say that in a country where agricultural pursuits are the only pursuits, and where the means of the payment of the rent are entirely destroyed for the time by the visitation of Providence, the occupier may regard the sentence of eviction as coming very near to a sentence of starvation.*

In connection with this passage we quote two others. Speaking in one of the debates on the Land Bill of 1870, Mr. Gladstone said :

"What is the greatest of all loss to a man? To lose his improvements is something, to lose his future profits is something ; but what is the greatest loss to a man? To lose his daily bread—to lose his means of livelihood.

When we think of loss, it may be loss of profit ; but in Ireland it is the loss of livelihood—the right to live."†

And in the same speech, on the Disturbance Bill, from which I have already quoted, he summed the meaning of the eviction figures as showing that 15,000 individuals would be "ejected from their homes, without hope and without remedy, in the course of the present year."‡ In other words, the Irish landlords—in the year following that in which there had been the worst potato crop since the Great Famine—the Irish landlords decreed 15,000 sentences of eviction, or, to use Mr. Gladstone's words, 15,000 sentences of starvation. I observed that Sir Stafford Northcote, in his speech at the Colston banquet, blamed Mr. Gladstone for the use of such expressions as I have quoted, pointing out the arguments it placed at the disposal of the Land Leaguers. This is very characteristic of the attitude of the present leader in the House of Commons of the Tory party. He does not stop to inquire whether Mr. Gladstone's definition of eviction is just or unjust, true or false ; it should not have been given, whether just or unjust, true or false, because the Land Leaguers might be able to utilize it. I am not surprised at the attitude of Sir Stafford Northcote ; a higher regard for the effect of statement on party discussions than for their truth or their falsehood is

intelligible in the humble lieutenant of Lord Beaconsfield and the faithful colleague of Lord Salisbury.

I have now, I think, proved my two propositions—(1) that there was fair ground for anticipating a famine in 1879 ; and (2) that the landlords would be ready to take full advantage of that famine to evict their tenants ; and I have thus established an analogy between the epoch of distress in the last three years with the period of famine between 1846 and 1849. I proceed to show how, with these facts before them, the Land League and its leaders acted.

1. The first thing to be done was to prevent a famine. To whom are we to attribute the prevention in 1879 of the scenes of 1847? Not to the landlords, for, as has been seen, they increased their harshness with the increase of the distress. Not to the Ministry, because they did not take one single step to meet the distress until months after they had been warned of its existence.* I claim that the credit of having prevented a recurrence of the scenes of 1847 in 1879 belongs absolutely, entirely, solely to Mr. Parnell. It will be immediately asked if I give no credit to the Duchess of Marlborough for raising the cry of distress and collecting vast sums of money to relieve it? Have I forgotten the Seeds Act? Do I give no credit to the Government for the introduction of the Relief of Distress Act? My answer is simply this : that the Marlborough fund was a flank movement to the agitation of Mr. Parnell, and the Seeds and Relief of Distress Acts were the children of his agitation. In saying this I do not impute evil motives. The motives which originated the Relief Fund and the Relief Acts were doubtless good ; but everybody who has watched the history of the subject must know that neither Relief Fund nor Relief Acts would have ever existed but for Mr.

* On March 27, 1879, the attention of the then Government was called to the probability of severe distress in Ireland. Mr. Lowther, at that time Chief Secretary, said he "was glad" to think that "that depression"—in Ireland—"was neither so prevalent nor so acute as the depression at present existing in other parts of the United Kingdom!" (*Hansard*, 3 S., ccxvi. p. 1399.) Nothing was done till November 22d, when the circular was issued authorizing loans of money to landlords.

* *Times*, July 6th.

† *Hansard*, 3 S., cc. 1318-19.

‡ *Ibid.* ccliii. p. 1666.

Parnell and the Land League agitation. They are both *post hoc* and *propter hoc*.

2. Mr. Parnell and the Land League had to deal with eviction, eviction being the inevitable sequel of distressed times. As will have been seen from the figures I have quoted, the work of destruction was not wholly prevented; the proportions that work of destruction did reach were enough to shock the mind of a just and humane man like Mr. Gladstone. I ask him, and all like him, this home question: How many more evictions would there have been had not the Land League existed? The highest total of eviction was apprehended in the present year: 15,000 people were to be ejected from their homes "without hope and without remedy." A terrible total, truly, in the year following a partial famine in some, and a complete famine in many, parts of Ireland; but how small in comparison to the total of 300,000 in the year 1846, and 50,000 in the year 1849! The enormous disproportion between the eviction figures of the two epochs of distress is not wholly to be attributed to the disproportion between the intensity of that distress, for the failure of the potato crop of 1879 was not so very much less than the failure of 1847; nor is it to be sought in the greater kindness of the landlords. The only agency which did exist in 1879 and 1880, and did not in 1847 and 1848, and the only agency, therefore, that can have caused the decrease in evictions is the Land League.

3. The third great danger against which the Land League had to contend was that the spirit of the people would be so thoroughly broken by the distress that they would patiently submit to whatever steps the landlords might take; the tenants might, under the pressure of famine, pass on to the workhouse, the emigrant ship, or the grave, as did their fathers in the Great Famine, with no sign beyond impotent wailings against a resistless fate. I take the cries of rage and fear which have issued from the landlord party; the hurricane of abuse through which the Land League leaders have been passing; the active, unscrupulous, and skilful conspiracy of calumny against the character of the Irish tenants, which has been working for so many weeks past—I take all these things

as proclamations of our success in saving the Irish tenants from the abject spirit of their fathers. To me, indeed, nothing in this great movement has been so astonishing—nothing has been a cause of such exultation of spirit, and such hopefulness of heart—as the change which the Land League movement has made in the temper of the Irish tenant. A race of abject, cowering, and helpless slaves has been transformed into an organized force of spirited, self-reliant, and even defiant freemen.

I next come to the consideration of the agencies through which the Land League has worked. Its main principles have been that only a fair rent should be paid, and that no one should take a farm from which another person had been unjustly evicted—and it has recommended combination among the tenants for self-protection. I will not discuss the legality or illegality of such advice—that question has been referred to the legal tribunals. It will be sufficient to briefly note some of the main objections, not of a legal character, which have been brought against those counsels. In order to understand the motives which dictated the prohibition against the taking of a farm from which there has been an eviction, it is first necessary to grasp this great and central fact of the land system of Ireland—namely, that the want of any other means of earning a livelihood has made the competition for land fierce, uncalculating, and self-destructive. Mill, in his "Political Economy," devotes several pages to this disastrous feature in our peasant life, quoting one remarkable case in which a farm, which was really worth £50 a year, was taken by a tenant at a rental of £450.* This fact leads to two conclusions—(1) That a combination is advisable among tenants to keep the demand for land within rational limits; and (2) That the money paid for the good-will or in the rent of a farm in Ireland is no guide whatever as to the real value of a farm. The first conclusion justifies the counsel of the Land League not to take a farm from which a tenant has been evicted, for it is the power of eviction which enables the

* Mill's "Political Economy," Book ii. cap. ix. p. 196.

landlord to stimulate unhealthy competition. There is, besides, this further and stronger argument in favor of the advice, that anything which suspends the power of eviction takes away from the landlord that power of issuing a decree of life or death which is the key to his citadel. The second conclusion from excessive competition—that the rent of a farm is no test of its real value—throws considerable light on the advice not to pay an unjust rent. The rent in most parts of Ireland is, in point of fact, a rack-rent; at all events, a rent which in ordinary times would be unfair, becomes in times of distress a rack-rent. Before I leave this point, let me just call attention to a matter which, I think, was too much lost sight of in the discussion on the Disturbance Bill. The 9th section of the Land Act of 1870, as is known, allows compensation for disturbance in cases of capricious eviction; but disallows compensation when eviction takes place for non-payment of rent. In the latter case, however, an important proviso is made; it is that the rent, the non-payment of which bars compensation, must not be "exorbitant." Now as a rent which in ordinary times is fair becomes in times of distress exorbitant, the rents in nearly every part of Ireland in the last two years became exorbitant; and, accordingly, the non-payment of such a rent showed not act as a bar to compensation for disturbance. It was found out in practice that the proviso, bringing the fairness or exorbitancy of a rent into the subjects of judicial discussion in the Land Courts, had proved a dead letter; and the Disturbance Bill, in insisting on the discussion of this question in times of distress, appeared to me always to have no further effect than that of making plain a provision which in the Act of 1870 was rather obscure, and of making effective a provision which in practice had proved inoperative. By rejecting that Bill the House of Lords placed a premium on eviction, and, so doing, supplied the agrarian criminal with the strongest temptation to crime.

I now come to deal with the objections which have been raised against the operations of the Land League; and though the temptation be strong to reply in hot and passionate words to the vio-

lent and even wicked language which has been employed against that body, I shall resist the temptation, and in dealing with this part of my subject, as throughout this article, I shall confine myself to the frigid statement of fact.

The chief objection against the Land League is that it has encouraged, and by encouraging has enormously increased, crime. Before proceeding to some figures which bear on this subject, I would ask any reasonable man whether the substitution of open agitation for secret conspiracy does not tend to the diminution of crime? And has not the Land League substituted open agitation for secret conspiracy? Up to the present epoch the tenant threatened with eviction was an isolated individual, with no weapon of defence but the blunderbuss; to-day the peasant is one of a disciplined and organized force, that finds in combination a weapon of defence far more effective, as it is far safer, than the bullet of the assassin.

Moreover, it is, as will be seen, one of the claims of the Land League that it has enormously decreased, and for some time past has even stopped, evictions altogether. Now every man acquainted with the Irish Land Question knows that if there were no evictions there would be no agrarian crimes; and the Land League, in putting down evictions, has accordingly helped to put down crime.

But it will be said that, however rational this may appear in theory, the fact remains that crime in Ireland was never so rife as since the creation of the Land League. A claim that the Land League has diminished crime will indeed appear something like a *mauvaise plaisanterie* in face of the fact that columns of the English journals have been filled for weeks with nothing but Irish outrages; in face of the fact that a large number of Liberal journals have been so shocked by the occurrence of these horrible crimes that they have rivalled the Tory organs in the demand for coercive legislation; in face of the fact, to put it shortly, that England is convinced that there never was such a horrible time in the entire history of the Irish Land Question as this epoch, of which the Land League was the parent. Lord Randolph Churchill, speaking at Ports-

mouth, put the general English impression on this subject in a convenient form. He declared that there were at present "scenes of discord and anarchy" to which they could find "no parallel since the days of '98."

I will now supply the reader with the opportunity of testing the accuracy of Lord Randolph Churchill's judicial summing-up of English opinion on the present state of Irish crime.

The dates I shall take are 1833, 1836, 1845, 1846, 1848, 1849, 1850-59, and, finally, 1870.

In 1833 there were 172 homicides, 465 robberies, 455 houghings of cattle, 2095 illegal notices, 425 illegal meetings, 796 malicious injuries to property, 753 attacks on houses, 3156 serious assaults, and, finally, the aggregate of crime was 9000.*

In 1836 crime reached even greater proportions. Comparing England and Wales with Ireland, we find that of persons committed the figures stood thus:†

Charges.	England and Wales.	Ireland.
Against the person.....	1,956	7,767
Against property, with violence	1,510	671
Against property, without violence	16,167	6,593
Against property, maliciously	168	502
Forgery and coining.....	339	214
Not included in above classes	1,024	8,144
Total.....	20,784	23,891

The extraordinary result, as the reader will perceive, is that the aggregate of crime was greater for this unhappy year in Ireland than in England and Wales.

Passing on to another series of years, we find the figures :

	1845.	1846.
Homicide	137	176
Firing at the person.....	138	158
Conspiracy to murder.....	8	6
Assault, with intent to murder	2	—

to which, adding various other crimes, we find the total of offences against the person are :

	1845.	1846.
	1,093	1,923*

Another classification of crime—offences against the public peace, including fires, demands or robbery of arms, riots, threatening notices, firing into dwellings and the like—shows that of this class of offences there were in

	1845.	1846.
	4,645	4,766†

I next take 1848 and 1849,‡ and the figures stand thus :

	1848.	1849.
Homicide	171	203
Firing at the person.....	97	53
Robbery of arms.....	237	113
Firing into dwellings.....	95	90
Incendiary fires.....	750	1,066

The following table, which I take from the criminal statistics for the year 1859 (p. 5.), gives the crime between the years 1850 and 1859 :

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.
Murder.....	113	118	69	73	53	55	30	52	36	45
Attempts to murder...	56	14	39	21	35	31	23	38	26	2
Shooting at, stabbing, etc	62	87	18	32	37	65	59	79	54	57
Solicitation to murder.	2	—	4	2	—	2	4	—	1	—
Conspiracy to murder..	12	10	13	20	16	11	8	2	3	3
Manslaughter.....	150	135	127	128	102	89	89	139	125	102

And, finally, the number of agrarian outrages for the year 1870 was 1329.‡

I now come to the present period. We have not as yet complete returns as to the crime of this year, but we have fair indications as to what its amount is likely to be. A return was presented to the House of Commons during the last session of the "agrarian outrages report-

ed to the constabulary between 1st of

* "Returns" (Feb. 1, 1847), No. 64, p. 1.

† *Ibid.* p. 2.

‡ I have not been able to find a complete return for the year 1847; but the crime in that year was so enormous that, as is known, a Liberal Government brought in a Coercion Bill. There is a return for the six months, ending in October, according to which the figures are: Homicides, 96; attempts on life by firing, 126; robberies of arms, 530; firing into dwellings, 116.—*Hansard*, 3 S. xcv. p. 276.

* "Annual Register," 1833, p. 41.

† *Ibid.* ‡ Thom's Almanac for 1880.

January, 1879, and 31st of January, 1880." This return (No. 131) was obtained on the motion of the Right Hon. James Lowther.

Twelve of the thirteen months covered by this return belong to 1879—the year when the value of the potato crop had fallen to £3,341,028 from £12,464,382 in 1876; when also the landlords had increased the number of evictions to 2667 from 1749 in the previous year; and in this period also the Land League was in full activity. What, then, was the total of crimes in that year? 977. The only information I have been able to obtain with regard to the present year is one which was brought in on the motion of Mr. Tottenham, the Conservative and landlord member for County Leitrim. This is a return (No. 327, dated July 8, 1880) of the number of offences committed between February 1, 1880, and June 30, 1880, in Galway, Mayo, Sligo, and Donegal—the four most distressed counties; and the number of the offences is 187. As to the murders in the present year, they have all attracted so much attention that everybody is acquainted with them. They are—the murder of Ferrick the bailiff, of young Mr. Boyd, of Lord Mountmorres, of young Downing the carman, and of young Mr. Wheeler, at Limerick—in all five murders. I leave the reader now to compare the amount of crime in the last two years with that in former years, as shown in the Tables I have quoted.

We are now able to estimate the accuracy of Lord Randolph Churchill's statement, that to find a parallel for the scenes of anarchy and disorder at present being enacted one must go back to the year '98. The member for Woodstock is a legislator that invites comment; but I abstain from any further remark just now than this: In the same speech in which he made the calculation the accuracy of which I have tested, he declared himself a strong supporter of the union between Great Britain and Ireland. I ask reasonable men whether wild, reckless calumnies like his on the character of the Irish people are calculated to promote union between the two countries.

I have now, I think, proved that the cry of an unparalleled era of crime in

Ireland, during the present agitation, is entirely baseless; and the next thing I would wish to explain is why it is that, the real state of facts being such as I have shown, the impression in England is so extremely incorrect. The phenomenon is strange, and yet it is most easily accounted for. In the first place, I would account for it by the language of Tory speakers, of which that used by Lord Randolph Churchill is a somewhat exaggerated specimen. Take, for instance, the speech of Mr. Gibson in the Ulster Hall, Belfast. Speaking of the events which followed the death of Lord Mountmorres, the late Attorney-General for Ireland spoke of the refusal by a peasant woman to admit the corpse of that unhappy nobleman into her house as a proof of the evil of the Land League. The Land League had "unsexed" this woman, was the phrase of Mr. Gibson. Now Mr. Gibson, though he employs his great talents for the perpetuation of the worst miseries of Ireland, is an Irishman, and he ought to know, as well as I, that the refusal of this unlettered woman was the result, not of the cruel spirit begat since the foundation of the Land League, less than two years ago, but of a superstition probably centuries old. In all the country districts of Ireland there lingers the belief that even the touch of a person untimely slain brings with it death; indeed, I know of the case of a hapless friend of mine who was allowed to drown in consequence of this o'ermastering idea in the rustics who were standing on the shore. This fact doubtless displays a most deplorable state of ignorance in the Irish peasant, just as the occasional appearances of rustics for assaulting old women as witches proves how old superstitions still linger in rustic England; but assuredly it is ridiculous to put down to the teaching of the Land League an incident which was the creation of a prevalent superstition.*

* Some incidents occurred at the meeting in Ulster Hall which might well make Tory speakers a little more discreet in their attacks on the leaders of the Land League. In the course of Mr. Gibson's speech there were several such expressions as "Shoot the priests!" "Shoot Parnell!" etc. Mr. Gibson made no reproof. He afterward wrote to the *Freeman's Journal* to deny that he had heard these interruptions. Though the *Northern Whig*

There are numberless other instances of the manner in which some of the incidents of the past few months in Ireland have been distorted by the Tory party. The brutal murder of Lord Mountmorres has given birth to a cycle of horrible legends. It is not true, for instance, that a number of young men danced in his blood—a terrible story, that owes its existence, I am informed, to the inventive brain of an official who employs his leisure in writing the vilest and most calumnious caricatures of his countrymen. Nor is it true that Lady Mountmorres was refused provisions because of hate to her unfortunate husband; she was refused provision, but for a very different reason. Among the other most notable outrages which have been manufactured I may mention three which stand out from the rest. (1) The papers published a report that the ears of a man had been cut off near Loughrea; the report caused everywhere natural and just horror. No man's ears were cut off at Loughrea, or in any other part of Ireland. (2) It was reported that a man had been attacked by three desperadoes near Macroom, and that, among other outrages upon his person, the unfortunate man's throat had been cut. It has since been proved that the unfortunate creature had inflicted upon himself the injuries from which he suffered. (3) It was reported that a woman had been "carded" near Lough Mask because she had in some way helped Captain Boycott. No woman was "carded" at Lough Mask, or anywhere else in Ireland. *Ex pede Hercu-*

declares that they were heard by its reporters, I unhesitatingly accept Mr. Gibson's denial, and I do so the more readily because I can confirm from my own experience at public meetings the statement that the speaker rarely hears such interruptions; or, if he hears them, is so absorbed in what he has himself to say that he does not think of noticing them. Mr. Parnell has assured me that he very seldom catches these cries, which make so prominent a figure in the newspaper reports. Mr. Gibson and his friends can scarcely deny to Mr. Parnell what they claim for themselves; yet be it remarked that the charge of inciting to assassinate, which so many Tory writers and speakers have made against Mr. Parnell, has been grounded, not on anything he himself said, but on the cry of some single drunken or insane fool in the crowds of many thousands which Mr. Parnell has not heard.

lem. These are, perhaps, the three most horrible reports of outrages that have been published, and these three reports are all false.

The object of the Tory leaders in exaggerating these reports is, of course, perfectly intelligible. A reform in the land system can only be prevented by raising such a feeling against Ireland in England as will encourage the Whigs and Tories in the lower House and the House of Lords to reject any bill brought in by Mr. Gladstone and his colleagues; for, without an overwhelming unanimity of opinion among the English people outside Parliament on such a subject, even the present powerful Ministry would be powerless inside the walls of Parliament. Secondly, the Tory leaders have calculated on driving the Government into coercion, and the introduction of coercive legislation would produce a chasm between the Ministry and the Home Rule members which might be perilous, if not fatal, to the chances of a Land Bill. These are the true reasons which have influenced the speeches of the Tory leaders; and while we may doubt the honor or honesty of such tactics, they are intelligible in a despotic oligarchy which is in the throes of dissolution.

The second reason why the impression of the amount of crime in Ireland is so completely erroneous is the attitude of the press. In these days the fate of nations depends upon the exigencies of newspapers. It so happened that this Irish agitation in its most acute stage was coincident with the rise of Parliament and the set-in of the "silly season." Irish outrage became the article in demand in the English journalistic market, and the supply was forthcoming. I do not accuse the Liberal journals of England of being wilfully the medium of slander and invention, though I confess some disappointment at observing the depths of their credulity, and the lightness of heart with which many of them have proposed the abrogation of all the liberties of the Irish people. Still less do I blame the attitude of certain classes of the English people. What means had they of knowing what was the state of Ireland but through their newspaper? and how could they know that their

newspapers were misinformed? The chief blame for the falsification of English opinion rests with those Irishmen who supply the English press with their news.

I have now, I think, succeeded in overthrowing the vast superstructure of error with regard to the object of the Land League and the means which it has employed. Let me shortly sum up my conclusions.

Comparing the present with the last epoch of distress, we find—(1) that while in the first epoch 300,000 are said to have died in one year of famine or pestilence, there is in the second epoch no known case of absolute death from either cause; (2) while in the former epoch evictions amounted in one year to 300,000, eviction at the present moment is practically arrested; (3) while in the former epoch a large amount of eviction led to the commission in one year of ninety-six murders, there have been but five murders in the present year; and

these vast differences between the two periods are directly attributable to the existence of the Land League.

Beyond this, the Land League has rendered inevitable a radical settlement of the land question; has transformed a whole race of hereditary, despairing, and impotent slaves into hopeful, self-reliant, and almost omnipotent freemen; and has shaken to its base a foul, plundering, and murderous tyranny of centuries' duration. This—one of the most marvellous and gigantic revolutions of any time—Mr. Parnell and the Land League have accomplished through a practically peaceful revolution, by constitutional agitation, and in the space of eighteen months.

Such are the high crimes and misdemeanors against the Irish people for which Mr. Parnell and his colleagues are about to be tried in a criminal court in the capital of their country.—*Contemporary Review*.

MR. WALLACE'S "ISLAND LIFE."*

BY PROFESSOR GRANT ALLEN.

EVERY great scientific theory passes through two stages, the inductive and the deductive. First of all it is built up by an accumulation of facts and inferences; the facts are traversed, the inferences are disputed, and a great battle rages over its general acceptance. But as time goes on the induction becomes complete; assailants are won over or silenced, or else die off; a younger generation is brought up in the new faith; and the doctrine passes at length as an ascertained truth into its deductive stage. Henceforth, instead of being fought over, it becomes an accepted principle for the interpretation of other facts in nature. Such has been the history of the Copernican theory, the Newtonian law of gravitation, and the Daltonian theory of atoms; such in our own time is the history of Mr. Darwin's hypothesis of natural selection, and Mr. Herbert Spencer's theory of evolution. Practically speaking, no biologist of

note now refuses to believe in the development of all living plants and animals from one or more simple original types. Even our bishops hint a possible acceptance, and hesitate a mild dissent only as to certain real or supposed implications. At any rate, the scientific world has long since got beyond the stage of arguing over Darwinism, and has taken the wiser and more fruitful course of applying Darwinian principles to the explanation of hitherto unsolved biological problems. Mr. Wallace was one of the first writers who thus abandoned the barren field of disputation for the real work of extending and tracing the consequences of the new discovery. From the moment when the great secret of natural selection first flashed upon his mind in the Malay Archipelago, as it had flashed upon Mr. Darwin's mind years before on reading Malthus, he has, apparently, had no doubts as to the final triumph of the truth. It was inevitable that in the end fresh facts and new explanations must break down the resistance of the old school; so instead of troubling him-

* "Island Life." By Alfred Russel Wallace. Macmillan & Co. 1880.

self by adding further arguments to the vast accumulation gathered by Mr. Darwin, he set himself to employ the evolutionist hypothesis, one of whose authors he might fairly claim to be, in the deductive explanation of zoological and botanical distribution. The results of his work he has already given us in more than one form; and his new volume on "Island Life" contains his latest views on the subject set forth in a clear and popular manner which should make them accessible to many readers who would not venture on the perusal of his more strictly scientific expositions. Moreover, the limitation of his subject in his new work to the special case of islands allows him to deal with those minor differences which are classed as specific merely, while his former volumes were restricted to the wider differences which characterize genera. Thus "Island Life" is essentially a new work, both as containing many later and more matured views, and as treating of a comparatively fresh and more limited area. Mr. Wallace has written nothing more clear, more masterly, or more convincing than this delightful volume.

Evolution is the key to distribution. Every great type must have originated in some particular spot, under the influence of certain special conditions; and from that spot it must have dispersed itself in various directions, according to the means of transport, and have undergone greater or less modifications to suit its altered habitats. At a very remote period, perhaps up to the dawn of the Eocene, Europe and Asia were peopled by no mammals except marsupials, like the kangaroo and the opossum. At that period Australia had some land communication with the rest of the world, and it thus acquired a population including these marsupials, then probably the foremost type of animals upon the earth. At the beginning of the tertiary epoch a new and higher type of mammals, the placental, appeared upon the scene in the great eastern continent, and soon wholly overran it. Splitting up first into sundry primary groups of hoofed and hoofless creatures, it shortly produced all the various races of ruminants, horses, elephants, carnivores, insectivores, rodents, and apes, which spread rapidly over the whole extent of Europe,

Asia, Africa, and America. These placental mammals quickly lived down the less specialized and developed marsupials, of whom the opossums in America at last remained the sole representatives on either great continent. But before the rise of the placental group, Australia had become insulated from the neighboring lands, with which it has never since had any direct connection. Accordingly the higher mammals never reached Australia at all till a few of them were carried there by man—the dingo by the black fellows; the horse, cow, and sheep by the European colonists. But, on the other hand, the marsupials had room to develop into numerous special forms, such as the kangaroos, the Tasmanian devil, and the wombats; because they were not kept down, as in Asia and America, by the competition of superior types. Thus the mere peculiarities of the Australian fauna sufficiently show us that Australia has never been united with Asia since the rise of the placental mammals—that is to say, at latest, since the end of the cretaceous period, and probably far earlier; for if it had been so united, we know that some of these superior forms must have invaded it, with the probable result of exterminating its native marsupials.

This familiar instance may be taken as typical of the class of questions with which Mr. Wallace undertakes to deal. It sufficiently exemplifies the two main elements in the problem, of which one is biological and the other physical, the latter, of course, being at present most in need of explanation. But the physical question, again, depends mainly upon the changes undergone by our earth in past times. We have to consider, not merely the existing distribution of land and water, of polar ice and tropical forest, of glaciated mountains and warm ocean currents, but also their previous distribution throughout the whole history of our earth. To recur once more to the example of Australia: if that great isolated land had ever been joined to the mainland of Asia since the beginning of the tertiary period, then we should find it now inhabited by mammals of the common Asiatic types. On the other hand, if it had ever been wholly submerged at any one time since

the date of its separation, we should find it wholly devoid of land mammals, such as the kangaroo and the other marsupials. The old-fashioned geologists would have led us to suppose that Australia had been sunk boldly beneath the ocean half a dozen times in that interval, and had been joined again sometimes to a great Antarctic continent, sometimes to South America, sometimes to Asia, sometimes, perhaps, to some vast mountain region now buried beneath five miles' depth of the Pacific. But if this were so, the fauna of Australia would be wholly different from what it is at the present day. We should find in its fragments of all the other faunas which were once able to invade it; instead of which we find a very ancient, very peculiar, and wholly endemic fauna, having no resemblance to anything which has existed in any other country since the later Eocene age. Thus the existing distribution of organic forms is at once a clew to the former distribution of land and water, and itself a result of that distribution. We can infer the cause from the effect; though we are often able to bring up independent evidence which forcibly strengthens and confirms our inferences.

Everything then depends upon the question whether, in the past, continents and oceans have had anything like permanence, or whether they have been in that perpetual state of flux and interchange which the old geologists imagined. If a deep sea now and then occupies the site of the eastern continent, from England to Japan; if a vast mainland occasionally bridges over the Pacific from China to Patagonia; if an open ocean often fills up the north temperate region, while a system of continents gathers around the south pole—then, of course, the task of tracing out the interactions between organic evolution and geographical features would be impossible. But we have seen already that in the case of Australia the fauna itself sufficiently points out the true facts of geological history; and the faunas and floras of the larger continents also tell a similar though slightly varied tale. Mr. Wallace, however, does not rely entirely or even mainly upon arguments of this nature. He shows by several independent lines of reasoning that the present distribution of land and

water approximately represents the distribution throughout an immense period of past time, at least ever since the opening of the secondary epoch. It is true that the earliest secondary deposits are quite modern in age, compared with the whole lapse of time since the first evolution of life upon the earth, but then we are little concerned with the distribution of those lower and chiefly marine forms of life which existed almost alone in the long primary epoch; while we are greatly interested in the higher and chiefly terrestrial forms which first appear in the secondary and tertiary epochs—the birds, mammals, and flowering plants. Mr. Wallace himself believes that the continents have always existed since palæozoic times in a circle around the North Pole, with three southward extensions, as at present; but he thinks they have undergone a constant development, which only reached its full form at the glacial period. Hence the real and practical question for our present purpose resolves itself into this—what evidence have we of the comparative permanence of our oceans and continents throughout the secondary and tertiary epochs?

To this question Mr. Wallace has always given satisfactory answers, which he now recapitulates and strengthens by further arguments. The continents which we see at the present day have probably almost always occupied much the same positions as those which they occupy in our own time. It is true every part of them has at one time or other been under water; but still these submerged parts were, nevertheless, high submarine banks lying in the immediate neighborhood of dry land. They were, in fact, parts of continental bosses, slightly depressed beneath sea-level. It seems likely that from a very early period the three great oceans—Atlantic, Pacific, and Indian—have filled the same deep hollows in which they now lie. It seems equally probable that two or three great masses of land, compactly grouped around the North Pole, and tapering toward the South, sometimes united and sometimes separated by shallow seas, but always essentially connected with one another, have almost invariably occupied the positions now held respectively by Europe, Asia, and North

Africa, by South Africa and by North and South America. Even Australia seems to have been relatively constant in position ever since the beginning of the Eocene age, and probably far earlier. It should be added, however, that Mr. Wallace alleges reasons for believing in the permanence of the actual continents even in palæozoic times.

Around all our existing continents there runs a belt of shallow water about 100 fathoms deep. Sometimes this belt stretches only 20 miles from the shore; more often it extends 100 miles; and in a few cases it forms a long bridge of several hundred miles between one continent and another. The depth of 1000 fathoms, marking what may fairly be called deep sea, sometimes approaches within 30 miles of the actual coast, and sometimes recedes to 100 miles or more. The shallow ledge which thus fringes and often unites mainlands may be regarded as in reality a submerged or non-emerging portion of the continent. Now, the dredgings of the Challenger have shown that sedimentary deposits, consisting of detritus from the land, are only collected as a rule within about 50 or 100 miles of the coast, the finest mud being rarely carried to a distance of 150 or 200 miles. Beyond this point the ocean bed is covered with sediment of purely organic origin, consisting of small siliceous and calcareous shells. Hence it follows that by far the larger part of all stratified deposits, and certainly all those containing sand, pebble, or visible fragments of rock, must have been formed within 50 or 100 miles of then existing continents, or else in inland seas, receiving the waters of great rivers. But such rocks—sandstones, limestones, conglomerates, and shales—occupy the centre of all our great continents; and they were probably, therefore, deposited either in arms of the ocean, like the Mediterranean and the Red Sea, or in vast inland lakes, like the Caspian. Professor Geikie has already pointed out the arguments in favor of the littoral origin of the palæozoic rocks; and Professor Ramsay's inaugural address to the last meeting of the British Association points in the same direction. Mr. Wallace adds several fresh arguments of like implication. Even as regards the chalk, generally

represented as a typical deep-sea deposit, he shows that its chemical composition differs considerably from that of the modern oceanic gobigerina ooze; while similar ooze from coral reefs and other shallow places resembles it much more closely. Dr. Gwyn Jeffreys, one of our leading authorities on the mollusca, declares that the chalk fossils are distinctly shoal water forms. Moreover, even the chalk is found only in a comparatively restricted belt of Europe, from Ireland to the Crimea, and from Southern Sweden to Bordeaux. The sea in which it was formed was, therefore, probably an earlier and somewhat larger Mediterranean, extending across Central Europe, and bounded by the Scandinavian Highlands, Russia, Austria, and South Germany, and the south of France. In like manner the large number of fresh-water and shore deposits found in all countries also proves the comparative permanence of the great land areas.

The permanence of oceans, even more important, perhaps, in its implications than the converse truth, is shown by equally cogent arguments. As Mr. Darwin remarks, hardly one truly oceanic island possesses even a fragment of palæozoic or secondary formations—a fact which clearly proves that the ocean bed from which they have been elevated has never at any time formed part even of the littoral belt surrounding a continent. Had continents or continental islands ever existed in their neighborhood, they would almost certainly have produced sedimentary deposits, as we know them to have done and to be still doing in the littoral belt of existing lands. Moreover, the deposits now being formed in the deep seas are wholly different from anything to be found in the formations which compose our continents.

Thus we find that our existing distribution of land and sea has persisted in the main throughout all time. But endless changes of detail have taken place from age to age; and upon these changes the distribution of animals and plants depends. Mr. Wallace will have nothing to do with those cheap and easy explanations which consist in running up a hypothetical continent across the bed of a vast ocean whenever you wish to

account for any quite modern peculiarity of distribution. He refuses to bridge over the Pacific merely in order to explain the presence of tapirs in Sumatra and in Brazil; he demurs to the invention of a lost Lemuria between Madagascar and the Deccan, simply because some South Indian species resemble some Madagascar types; and he will not consent to manufacture a road from New Zealand to the Cape and to South America, for no better reason than because struthious birds are found at the present day in all three of them, and in no intermediate region. His wide grasp of facts, geological, palæontological, and biological, enables him to frame hypotheses which are less simple, it is true, but which have the merit of explaining all the facts instead of being contradicted by nine tenths of them. He knows that ancestral tapirs once ranged in every country from Sumatra to Paris, and from Paris to North America; that ancestral ostriches swam about in the Western States or roamed over the plains of England; and that we can more easily explain the similarities of Indian and Madagascar species by other known principles than by such a clumsy and false expedient as that of a Lemuria, whose fauna is not to be found in any of its supposed existing fragments, Bourbon and Mauritius.

Passing on to the problem of geological climates, so closely connected with the distribution and dispersal of plants and animals, Mr. Wallace arrives at conclusions which are, perhaps, somewhat more doubtful, certainly more opposed to received opinions, yet which seem conclusively reasoned out. It has for some time been acknowledged that certain recurring astronomical conditions of our planet help us largely to account for those great changes of climate which we know to have often occurred in geological time; and it has usually been held as a corollary to this opinion, that glacial epochs in the northern and southern hemispheres respectively must recur at certain fixed though irregular periods. Dr. Croll has pointed out that a particular combination of astronomical revolutions—the precession of the equinoxes and the motion of the aphelion—brings about a change of position in a cycle of 10,500 years, so that the hemisphere

which at the beginning of that period had winter in perihelion at the end has it in aphelion. At the present moment this cause probably accounts in great part for the difference between the climate of the two hemispheres; for the north has now a somewhat shorter and warmer winter than the south. But the eccentricity of the earth's orbit itself also varies largely and irregularly, though very slowly; and it is calculated that when the eccentricity is highest the differences in temperature brought about in either hemisphere by the cycle in question would be very much intensified. Dr. Croll points out that such a period of high eccentricity began about 250,000 years ago, and reached its maximum 210,000 years ago. He believes that the last glacial epoch, which formed the ice-worn boulders and moraines of our Welsh and English hills, began at this period of high eccentricity, and continued intermittently in either hemisphere with each cycle of 10,500 years down to some 80,000 years since, warm interglacial periods occupying the intervals. This theory has been pretty generally accepted by all scientific men. But Dr. Croll also believes that similar glacial periods have probably occurred with each irregular period of high eccentricity. He even points out the probability that an ice age, far more severe than that with whose remains we are so familiar, occurred about 850,000 years ago, and coincided with some part of the Miocene period. To this latter portion of Dr. Croll's argument Mr. Wallace demurs. Accepting the general theory that the last glacial epoch was due in the main to a period of high eccentricity, he denies that every such period necessarily produces an ice age.

Mere astronomical changes are not in themselves sufficient to account for the climatic peculiarities of glacial epochs. Mr. Wallace shows that glaciation can only take place when the circumstances allow large accumulations of ice and snow. Such accumulations require high land at or near the poles. He then examines the tertiary formations of Europe, and points out that they contain no large deposits of presumably glacial origin, but that, on the contrary, they involve almost without exception the prevalence of a comparatively warm and

almost tropical climate throughout the whole long period in which they were deposited. The Arctic flora of tertiary and secondary times was also of a temperate character. Putting all the evidence together, he urges that since the Permian period, at least, the climate of Northern Europe and America was uninterruptedly warm (up to the last ice age), while that of the Arctic regions was comparatively mild. The last glacial epoch he believes to have been an exceptional phenomenon, due to the rise of much high land about the pole, coincidently with the coming on of a period of high eccentricity. On the other hand, the warm Arctic climates which prevailed throughout the secondary and tertiary ages, he attributes to the existence of an open polar sea, with currents of hot water setting toward it from the equatorial oceans. If this view be true—and it is enforced by all that wide and minute knowledge of facts in every department of science which is Mr. Wallace's speciality—we must in future regard geographical conditions as far more important than astronomical in producing alterations of climate. The alternate warm and cold spells supposed of necessity to accompany periods of high eccentricity need now only be expected in cases where special features of polar geography synchronize with unusual distance from the sun in winter.

In the second half of Mr. Wallace's work, the general principles of biological distribution are particularly applied to the special case of islands, which allow of detailed treatment impossible in wider stretches of land. Islands may be grouped in two great classes, oceanic and continental. The former are those which have never at any time formed part of any continent, and which, therefore possess no indigenous terrestrial mammals. The latter are those which have once been united with the adjacent mainland, and which, therefore, possess the same general type of fauna and flora, more or less profoundly modified by local conditions in rough proportion to the length of time during which they have been isolated.

Oceanic islands are of volcanic or coralline formation, and contain few or no old sedimentary deposits. Their fauna and flora have been wafted to them over

sea, and are, therefore, mere fragments of those which exist in the nearest mainland. Birds and flying insects form their chief animal inhabitants, because they can be carried out to sea for long distances on their own wings during heavy gales. Land snails, borne in the egg or in crevices of wood, are also common. On the other hand, mammals and amphibia are wholly wanting. Plants, whose seeds or spores can be readily borne by wind or waves, are comparatively abundant. The degree of local modification which the species have undergone in their new homes depends mainly on three conditions—the length of time during which the islands have existed; the frequency of fresh arrivals to keep up the purity of the old types; and the peculiarities of the surface and other productions, reacting upon the various species.

In the Azores we have an instance of an oceanic archipelago, where most species have remained fairly true to their original continental forms. Lying about nine hundred miles west of the Portuguese coast, they possess an indigenous fauna of wholly European character, only slightly modified in a few unimportant particulars. It consists of birds, insects, and land shells. Most of the birds are waders or swimmers; of the remainder, all but three are common European and North African species. Two out of the three exceptions belong to Madeira and the Canaries; while one, the Azorean bullfinch, is peculiar to the islands. Thus, a single bird alone has varied enough from its ancestral type to be considered as a separate species. The reason for this relative fixity of type is that the Azores lie in the belt of storms, and that stragglers from Europe arrive in the islands almost every season. The one species which has varied is the bullfinch, which does not migrate, and is, therefore, less likely to be blown out to sea. Among the insects, the butterflies are almost all European; but twenty-three beetles out of two hundred and twelve are peculiar to the islands, while a few others belong by origin or affinities to South America, to the Canaries, and even to Madagascar. As beetles must be reinforced by fresh individuals of their own species far less frequently than birds or butterflies, the

greater divergence among them is perfectly natural. Lastly, land snails, which have least power of dispersal of all, show the largest amount of local peculiarity, nearly half being found in no other place. The Bermudas stand to America in much the same relation as the Azores to Europe, and their fauna and flora display almost exactly analogous features. Lying two hundred miles nearer the mainland, however, the chances of stray birds arriving from time to time are even greater than in the Azores; and so all the birds without exception belong to American species. The insects, too, remain true to type; but there are four peculiar snails and two ferns which have sufficiently altered to rank as separate kinds. These two insular groups are examples of recent oceanic islands, only just beginning to possess a peculiar fauna and flora of their own, and prevented from doing so more rapidly (if at all) by the great facilities which exist for intercourse from the continent.

The Galapagos Islands stand nearer to South America than do either of the previous groups to their nearest mainland. But they are probably of older formation, and they lie within the stormless equatorial belt. Hence their fauna and flora are far more peculiar. There are two large tortoises, derived from America, but now quite distinct from any American kind; and five lizards, three of which differ specifically from their ancestors, while two have so far diverged as to be accounted separate genera. Among the birds, we find every gradation of difference, from those which are perfectly identical with continental species, to those which have varied widely enough to be classed as generically distinct; and this diversity bears an obvious relation to the facilities which each original species possesses for migration to the islands. The insects and land-shells are mostly peculiar; while a still larger number of the plants have adapted themselves to their new situation, sometimes out of all knowledge of their ancestors.

Continental islands differ in several important respects from those of oceanic origin. They are more varied in geological features, containing ancient and modern stratified rocks, and they always

possess at least some terrestrial mammals. Recent continental islands, like Great Britain, are situated on submerged banks, connecting them with the mainland: they resemble the continent in their geological structure; while their fauna and flora are identical with those of the neighboring mainland, or differ very slightly from them. Our own country forms, perhaps, the best example of this class. It possesses a modest mammalian fauna, identical with that of northern Europe, as far as it goes, but much poorer; while in reptiles and amphibia it is even more deficient. One of our birds, however, the red grouse, is decidedly peculiar; and two other varieties, the coal-tit and long-tailed tit, are sufficiently different to be ranked by competent authorities as separate species. Among fresh-water fish we have no less than fifteen kinds peculiar to Britain; and some of these have very restricted areas, being only found in one or two Scotch or Irish mountain lakes. This strong tendency to local variation is due to the difficulty or impossibility of intercourse between the inhabitants of one tarn and another. A good many insects are held to be more or less specifically British, and there are certainly a great number of marked varieties. These incipient differences are most noticeable in the outlying islands, such as the Isle of Man and the Shetlands. Among the mollusca, Ireland has a slug and a snail found nowhere else. Altogether, Mr. Wallace shows by a most exhaustive survey of the British fauna, that though it is still in the main identical with that of the continent, a considerable amount of variation already exists, and shows itself most markedly in the most isolated situations, or among the most scattered groups of organisms. Borneo and Java, though perhaps no older than Britain, display the same peculiarities even more distinctly, owing in part to the greater richness of tropical life, but still more, no doubt, to their wider separation from the adjacent continent.

Perhaps the most wonderful specimen of ingenious reasoning in the whole book is contained in the singularly clever and intricate chapters on New Zealand, classed with Celebes among anomalous islands. The fauna and flora of New

Zealand have long formed an insoluble crux for the geographical biologist; and Mr. Wallace's explanation, though it perhaps makes rather large demands upon our powers of assent, has at least the merit of perfectly harmonizing all the facts. Whether the series of changes which he supposes to have taken place are actually those which did take place or not, it is at any rate certain that such changes would have resulted in the state of things which we do as a matter of fact now find existing. It would be impossible adequately to summarise his arguments without employing many pages; but the gist of his actual conclusions is this:

During the Cretaceous period, Australia was divided into two large islands, one of which, the western, was temperate in climate, and almost as extensive as the existing continent. The other or eastern island was a long and narrow strip of land, extending from Cape York on the north to a point beyond modern Tasmania on the south, and so stretching from the tropics into the heart of the temperate zone. Between these two islands lay a sea, in whose bed cretaceous and tertiary deposits are now found uniting the two halves of the continent. From New Zealand, a long submarine spur or bridge runs northwestward toward Cape York. At some time or other a land connection must have existed along this spur, by its temporary elevation above the sea level. But this connection was only with tropical eastern Australia, while between New Zealand and temperate Australia a deep sea channel has always lain. In this manner those Australian plants and animals which already inhabited the tropical portion of the eastern island were enabled to invade New Zealand; but those which inhabited the western island were unable to do so, unless they had already established themselves at an earlier period by stray accidents in the sister land. At an epoch subsequent to the re-insulation of New Zealand, the two Australias became united by the upheaval of the cretaceous and tertiary sea-bottom, and the faunas and floras of both halves were enabled freely to mingle with one another. Accordingly, at the present time, the flora of New Zealand presents the most apparently capri-

cious relations to that of Australia, many families being common to both, while others are unaccountably absent. Unaccountably, that is to say, before Mr. Wallace's ingenious solution had been offered; for if he is right, the common families and genera are those of the old tropical Australia, altered and modified of course by change of circumstances; while the families and genera found in Australia but not in New Zealand are those of the separate western temperate island. So that now temperate New Zealand has relationships not with the temperate but with the tropical portion of the Australian plant-life.

So much is sufficient to account for the main peculiarities of the New Zealand flora; but other facts are implied by its fauna. The large number of wingless birds, extinct or living, in so small a country, calls for special explanation. Fifteen species of apteryx and moa have within recent times inhabited New Zealand. Hence we must suppose that when the ancestral form of these wingless birds first established itself in the island its area must have been far larger than at the present day. Again, the large island thus postulated must have split up at a later period into several smaller but still considerable islands, on each of which a local species of moa or apteryx was developed. Then once more the various islands must have been reunited by an elevation of the great submarine bank which still probably marks their sites; and the various local species must thus have spread themselves over the whole area. Lastly, the larger part of this new land must afterward have subsided again, leaving all the species crowded together in the comparatively narrow space of the existing New Zealand. Thus, by the combination of various facts, botanical, zoological, geological, and geographical, which he knows so well how to co-ordinate, Mr. Wallace evolves order from the chaos of various isolated observations, and builds up for us a complete history of New Zealand and the surrounding lands, every one of whose items is a masterpiece of connected reasoning. Even if we allow that the whole result is perhaps too hypothetical for implicit acceptance, we must at least recognize the wonderful skill with which the evi-

dence has been pieced together, and the reconstructive power by which it has been made to yield a consistent and probable story. If we are not certain that Mr. Wallace's account is exactly what took place, we may at any rate feel sure that it is very near the actual truth.

As a whole, "Island Life" is almost above criticism. Mr. Wallace brings to his task a rare combination of qualities not usually compatible with one another—the faculty for wide and far-seeing generalizations, and the faculty for

minute and painstaking scrutiny of facts. He takes his subject-matter from all the sciences, and he builds it into a new and harmonious whole. Every page is interesting merely in virtue of the special facts which it details; but the entire work is a thousand times more interesting in virtue of the consistent thread of reasoning which runs through it, and of the general light which it throws upon the whole course of organic evolution, and the whole physical history of our planet.—*Fortnightly Review*.

A VISIT TO THE OLDEST STATE IN EUROPE.

BY J. THEODORE BENT.

THAT the smallest and the oldest of European governments should be combined in one is in itself a curious fact; that this government should be engulfed, so to speak, in the middle of Italy, with principalities, duchies, and kingdoms whirling around it like leaves driven by a winter's storm, adds force to this political phenomenon; but that so little is known and so little veneration paid to this Methuselah among states is perhaps the most extraordinary feature in its existence among us in the nineteenth century.

For this is a community whose authentic history dates from the days of Pepin, father of Charlemagne, and whose legendary history carries us back to the days when the persecutions of the Roman Emperor Diocletian drove a pious anchorite to the mountains in the neighborhood of Rimini, there to form a semi-ecclesiastical community, which still retains its primitive simplicity both in constitution and customs.

San Marino is the name of this Liliuputian state; it has a population of eight thousand souls, an area of sixteen square miles; it is governed by two Captains, it has Secretaries of State for home and foreign affairs, and above all it has a most exemplary Chancellor of its limited Exchequer, who has invariably an annual balance to place at his country's disposition.

Here, indeed, is a field for a modern Gulliver; the whole atmosphere of the place is, politically speaking, Liliuputian,

and one longs to people the solitary mountain which occupies almost the whole of the Republic with dwarfs and beings of another world. Strange to say, in Roman days this mountain was known as the "Titanic rock"; here, among the upheaval of strata and yawning chasms of tufa, the ancients conjured up a race of giants, ambitious in their greatness to overthrow the King of Heaven; while now we find existing on this very spot the most pigmy of states. As the scene of a fairy tale San Marino would offer the facilities of a Brobdingnag and a Liliput all in one.

Curiosity led me to this mountain Republic, curiosity led me to examine its history and its constitution, and my curiosity was rewarded by the discovery of a unique instance of mediæval statecraft, the sole survivor of the countless republics which once dotted Italy, still governed by institutions which were hoary with age when Cæsar Borgia endeavored to add it to his dominions, and which Napoleon the Great respected and Garibaldi treated with decorum. Let those who feel disposed visit with me this tiny state and discuss its peculiarities, only alluding to its constitution and history with Napoleonic respect when occasion may require.

After a drive of a few hours from Rimini our *vetturino* made us aware that we were crossing the frontier of the Republic, where the road which leads to the little commercial village at the foot of the Titanic rock traversed a stream

which formed the eastern boundary, and Gulliver found himself among the "ever free" Lilliputians. And indeed there are not wanting numerous signs of this much vaunted liberty which the eight thousand Lilliputians enjoy. The word *Libertà* is chalked up in large letters against every second house; their motto of *Libertas* is forced on your notice at every turn; it adorns their stamps, their coins, their flag; it is engraven over each of the city portals; and before a few days' residence among them had expired, the very notion of liberty became irksome in the extreme. I went to the theatre and was greeted by a drop scene representing almost naked Liberty. I mounted up to the piazza and found a white marble statue representing the same personage. I ascended still higher to the parish church, and lo! the patron saint stood over the high altar, with a scroll in his right hand on which was written Liberty!

Nevertheless it was satisfactory to learn that this liberty ended not in a display of the simple word, and this boast of fifteen centuries' standing is still genuine in all its branches. Taxation here is reduced to a mere nothing; the voice of the people governs everything. The officials are sufficiently paid by the honor conferred upon them, and receive a mere nominal salary. Property, hence, as compared with Italy, is of enormous value, and a law has been passed enacting that no foreigner can hold land within the narrow precincts of the Republic unless he has spent six consecutive years as a citizen within its boundaries, and during this period has conducted himself as a moral and exemplary citizen should.

Very simple-minded are these Republicans; their requirements are but few, and the luxuries they can offer to visitors are exceedingly limited, so that to one anxious to reside among them for any length of time the accommodation offered by the little inn in the Borgo or commercial centre at the foot of the rock, will be looked upon with blank dismay. Ankle-deep we sank in mire as we crossed the threshold, to be accosted by every stench with which an Italian pot-house is redolent; the bedroom looked alive with discomforts, and, though breathing an air of freedom far older than any we could find elsewhere,

we heaved a sigh, and wished it could be less impure.

Before, however, we decided on establishing ourselves in these quarters, I determined to issue forth and see if the little town, the centre of government, built upon a cliff a thousand feet above the centre of commerce, could offer us a more inviting resting place. I was fortified in my search by a letter of introduction to a leading Republican, Domenico Fattori by name, no less a personage than the Secretary of State for Foreign Affairs, and brother of a most learned citizen, who had printed a little story of his country's liberties which was exhibited, together with other treasures of the like sort, in San Marino's little room at the last Paris Exhibition.

Thus I stepped up the steep, rugged path which leads to the city, gaining confidence at every step as I left below me the loathsome "Borgo," and saw enchanting panoramas of mountains, plain, and sea, all brilliantly illumined by a rich opalesque sunset over the pin-naclad Apennines, which here assume those grotesque shapes delineated by masters of the Umbrian school.

Did my eyes deceive me? No, it was indeed true. Coming toward me down the rugged path, I saw a gentleman in a tall hat, wearing a badly-fitting suit of dress clothes and a white tie, and in attendance upon him was a lackey in gaudy livery. Nothing more out of place could be imagined: a half-naked anchorite or a skin-clad herdsman one would have passed by unnoticed; and my heart misgave me, for into this wild spot I had not thought it necessary to drag my evening toilette. I questioned my conductor as to the meaning of this apparition, and learned to my relief that he was a Captain of the most serene Republic of San Marino out for a state walk. When engaged in his official capacity a Captain always wears this dress, and in the state wardrobe six dress suits are kept to fit all shapes and sizes of Republicans who may attain to the dignity of ruler.

It was with some feelings of trepidation that I knocked at Fattori's door, and was ushered into a sitting-room to interview his wife and sister, owing to the absence of the lord. I told my tale candidly. I stated how charmed I was with all I had seen except the inn, and

that I craved for a more pleasing habitation. They referred me to a neighboring house, and invited us next day to join their party in witnessing the grand ceremony of the installation of the incoming Captains, on which occasion, twice a year, the Sammarinesi shake off their lethargy and appear right merry in holiday attire.

Charmingly primitive were our host and hostess, whom I found inhabiting a little house near the principal gate of the city; perhaps no two people could be more entertaining in their domestic arrangements. The lady of the house was portly and garrulous; she was, we remarked, most noble in her bearing, and of noble Republican blood she proved to be. Hers was one of the oldest of San Marino's noble families, for, owing to the inconvenience of having two illiterate Captains, certain families are set apart as noble, from among whom one of the rulers is chosen. Here their privileges of nobility cease, but not their pride, for old Signora Casali, whose maiden name was Belluzzi, was most proud of her pedigree. She scoffed at the later elevations to the Sammarinese peerage as "*nobilità di carta*," mere paper upstarts, and for her own parental house she claimed the honor of possessing the genuine nobility of blood. She thoroughly despised her lame and drunken husband, who was the impersonation of a henpecked nonentity. Every meal we ate under the shadow of their roof was attended by the talkative pair, and many were the stories they told us of their quaint little country, which served as a relish to many a frugal repast.

Though poor, our accommodation was cleanly, and though our food was brought up from the Borgo and invariably arrived cold, yet the keen mountain air assisted us to dispose of most unpalatable dishes. Everything they sent us tasted the same—be it turkey, beefsteak, or chicken, the difference was hardly perceptible; but we had come to study the Liliputians and not our own comforts, so we were content.

How do the Liliputians amuse themselves? was one of our first questions, and we soon found them a right jovial eight thousand. Religious festivals are common, and so is wine, and the two

combined result in many an uproarious scene. The Sunday before we left was the festival of Santa Mustiola, celebrated at a short distance from the town. After the formalities of the mass and procession had been gone through, crowds of men and women collected at a neighboring house to drink and play games. By this time I was well known to most of them, and each exhorted me to put my lips to their brimming jugs of wine. They filled my pockets with walnuts. So intent were they on hospitality that I was forced to watch my opportunity to effect an escape as fast as my legs would carry me, to avoid involuntary inebriation.

On the day of San Marino, their patron saint, they hold grand festivities outside the walls. The *pièce de résistance* for this day is a refined species of cruelty to animals: a live cock is procured and hung by its legs from a tree; each competitor in turn endeavors by a leap to wring its neck. Great excitement prevails among the bystanders, and when success attends the attempt the victor is loudly cheered, he receives the bird by way of reward, and the unsuccessful pay a small sum toward the purchase of the cock.

Winter at San Marino is terribly severe; for months they are snow and frost-bound, and to amuse themselves the Republicans have invented a species of tabogging, and down the main street of the town they whirl themselves on a crazy piece of wood with terrible velocity. Last winter a lady Sammarinese gained for herself an unpleasant notoriety at this game, for she slipped off her *liscia* or sledge, and performed the rest of the downward descent on her own person, which became woefully contused thereby.

The first of April is a day of general mirth and hilarity. Woe to the Liliputian sluggard who tarries in bed after sunrise on this morning; he renders himself liable to be dragged from his couch, and in his nocturnal attire placed on muleback with an umbrella in his hand, and, shivering with cold, he is set up as an object of derision in the most exposed part of the town. This disaster one year befell our old host, who had been imbibing freely the night before. His wife entered fully into the fun of the

thing, and assisted her husband's tormentors in laying their plans. However, lest her domestic arrangements should be exposed to question, she took care that her spouse should retire to rest with a clean night-gown, so that he might appear before the world to the best advantage.

It is the case at San Marino, as it is in other primitive societies, that the marriage ceremony is attended with unusual merriment; the happy pair trip along the street attended by all their friends at an early hour in the day, to be united under the roof of their country's god; or, if the distance be great, the bride rides with her lady friends astride a mule. On the return to the parental homestead the bride and bridegroom are placed aloft on a dais to be the cynosure of neighboring eyes for the remainder of the day, while wild dancing and festivities take place around them. It is a keenly contested point among the assembled matrons, who shall have the honor of assisting the bride on retiring to rest; but it is the oldest and most venerated of the Liliputian mothers who is appointed to the almost sacred office of presenting the "*nouveaux mariés*" with a mess of pottage at sunrise.

They dearly love the Italian game of *palla* on this mountain-top; they are inveterate theatre goers, possessing two within their territory; an excuse for a masquerade they seize with avidity, and talk incessantly of their success in deception on such occasions. Our landlady told us how her mother, when eighty years of age, had gone to a masked ball dressed as a girl of seventeen, and, thanks to her good figure and activity, she was enabled to carry off the palm of being belle of the evening.

Let us now say a word about the constitution of this curious little state. In it we see the lineal descendant of ancient Rome, tracing its pedigree through the vicissitudes of mediæval Italy and her municipal organizations, each of which reproduced a miniature example of the mighty Roman fabric. Here, in the days of constitutional governments and deeply elaborated schemes of legislation, we find two old Roman consuls ruling a speck of Italy. They now call themselves Captains, but one is still patrician and one is still plebeian, as in the

earlier days of the Roman Republic; they owe their election to the Senate, which at San Marino as in Rome still wields the chief executive power, but now it is termed the Council of Sixty. There is yet another power in the state, namely, the general *arringo*, or gathering of the people, to decide on momentous questions of the day. Each male Republican can here make his voice heard; but it is now but seldom convened, and occupies much the same position that Rome's *Comitia Curiata* did in the latter days of the Republic.

I felt myself lucky when one day our host informed me that an *arringo* would be held on the morrow, and that he would have much pleasure in conducting me thither. My thoughts involuntarily wandered back to the days when Rome's people were summoned to the *Comitia* to decide on peace and war, but I was not privileged to hear an eager unanimous decision on the necessity of crushing Carthage, or of resisting to the death the invaders from Gaul. No, it was a real blow to my dreams of the past when some forty or fifty Republicans assembled to discuss the advisability of opening telegraphic communication with the neighboring town of Rimini, and thus did the degenerate offspring of the Roman Curia on that day recognize its existence in the nineteenth century, and acted accordingly.

This existence of telegraphy I look upon as one of the first symptoms of decay in our veteran state. The simple-mindedness with which they assembled daily around the postman in the Borgo at the sound of his bell, and awaited the distribution of his small handful of letters, will rapidly disappear. They resisted to the death a tempting proposition for a railroad, an hotel, and a gambling house, from some energetic company; but will they resist the more insidious innovations which will follow in the wake of the electric wires, and in the train of the feverish excitement incident on having a separate room in the Street of Nations at a Paris Exhibition? No, if I could have that day recorded a vote in San Marino's assembly, I should have opposed the introduction of the telegraph. I should have opposed entering into contact with the outer world, and have been content to boast of the great-

est claim to notoriety San Marino has, namely, that of being a living fossil of bygone ages.

Let no one who can so arrange fail to visit San Marino on April 1st or October 1st; perhaps, if he be not an early riser, for above-mentioned reasons the latter date had best be chosen; for on these days the Captains are elected for the ensuing six months, and the visitor will derive much amusement, if not profit, from being present at the ceremony. Their dress is rich; they are resplendent with the cordon of San Marino's military order around their necks, and moreover a eulogistic address is delivered to the bystanders, entering deeply into San Marino's historical lore. On this day is to be seen the little Republican army of eighteen strong, drawn up to the best advantage. Though the soldiers have no notion of drill or of military bearing, though their gaudy uniforms fit them like sacks, nevertheless they are unique in themselves; there are only eighteen such in the whole wide world, and they represent the smallest standing army in existence. However, San Marino is not entirely dependent on them for its defence; every male citizen is presumably a soldier, and they are divided into several regiments; but their uniforms have long since been worn out, and in these days of peace the prudent lawgivers have not seen fit to replace them. Yet the law obliges each man to keep a gun and a cockade in case of a rupture with some foreign power.

I feel morally convinced that Lord Cardwell must one day have been at San Marino, and, while sighing over the extravagance of the British lion, have mentally resolved to follow the humble example set him by Europe's smallest state.

The traveller who is not fortunate enough to be present at the installation of the Captain may any day get an order to inspect their state wardrobe, where are seen their rich velvet cloaks, their insignia of office, and the above-mentioned collection of dress clothes; he will then feel thankful that he was not born a Sammarinese, with a chance of the captaincy, for it would require an acute archæologist to decide on the date of these raiments, and an entire discre-

gard for cleanliness to allow of putting them on.

For the lovers of legendary lore and wild fantastic beauties, San Marino is a perfect paradise. Legends are attached to each weird spot, principally connected with the history of their patron saint, and the scenes of his spiritual labors in the days of Diocletian. There is his bed of hewn stone, his garden in an almost inaccessible cliff, his head and face in the parish church; but perhaps the heritage he has left his successors most worthy of remark is their skill in stone-masonry. Himself a quarryman employed in building Rimini, S. Marino gathered around him on his mountain a colony of his comrades, and for fifteen centuries these men of San Marino have hewn and toiled in their natural workshops for a means of livelihood.

They are most expert too in the rearing of cattle, and from far dealers come to the fairs at San Marino to purchase the far-famed oxen fed on the slopes of the giant mountain.

Very excellent grapes are produced on the sulphurous soil around Mount Titano, and the wines produced from them are sparkling and pure. Their cellars beneath the mountain are warm in winter and cool in summer; no wonder then that they exceed occasionally in their libations. There is a well-known character at San Marino, an old beggarman, who gains his livelihood by means of a poem he once wrote; he has spent his patrimony on drink, and now subsists on the enthusiasm excited by his stirring verses. This poem is entitled, "*Che Tremenda Repubblica*," and, intoxicated with their love of liberty, the Sammarinesi at their festivals will listen again and again to the pompous refrain of the old man's song. He is the hero of their oft-repeated festivals and the minstrel of their board.

It was with many feelings of regret that we left this old-fashioned little country, and it was with infinite pleasure that shortly after my departure I received an intimation that for the interest I had taken in the Republic they had thought fit to make me a citizen. For in these days of craving for novelty it was satisfactory to me to look through the list of citizens, and find myself the only Eng-

lishman enrolled therein. Continental celebrities there were by scores whom interest or curiosity had brought in contact with the Republic; and the accompanying letter, herewith transcribed, will show their own opinion of the honor they conferred upon me. It ran as follows:

SAN MARINO, Feb. 14, 1879.

ILLUSTRIOUS SIR AND FELLOW-CITIZEN: The gift of citizenship of San Marino is truly a great one, since if perchance you are at a distance you may be protected thereby; but if you come to this Alpine mountain no one can molest you, and you will be respected by all, and possess the same privileges that the other citizens enjoy. Accept, then, dear sir, this diploma, in order that the great city of London may rejoice with you over the possession of it. Be good enough to acknowledge the receipt of the diploma.

Your devoted servant,

FRANCESCO CASALI.

P.S.—Our Republic enjoys the greatest tranquillity.

Before bidding adieu to San Marino, I propose laying before any traveller who may wend that way the advantages which a sojourn in the Republic offers for exploring an almost unknown district of the Apennines. By means of a small pony-chaise, possessed by an energetic Republican who has seen somewhat of the outer world and served under the Italian flag in the Crimea, we were enabled to make some delightful excursions from our Republic to Verruchio, where Dante places the scene of the imprisonment of the erring Paolo and Francesca da Rimini, and where a red mediæval castle, a stronghold of the Malaesta, dominates a beetling cliff, and looks down in grim silence on a little town teeming with reminiscences of the *wrongheads*.

To the small streamlet which once decided the destinies of the world we paid a pilgrimage—the far-famed Rubicon, which flows some few miles beyond Verruchio, or rather there is the bed in which it once did flow.

San Leo offers the architect two rich

and ancient cathedrals where the bishops of Montefeltro once held their see. This is indeed a strange weird spot, built on a rock which, like San Marino, is raised 2000 feet above the surrounding valley. On the journey thither from San Marino, the traveller passes Monte Maggio, or the "bowing mountain," which the countryfolk tell you inclines eastward each year more and more in pious reverence toward the Holy Sepulchre; and the old inhabitants of San Marino affirm that now they can distinctly see houses which were invisible from the opposite valley in their youth. And Monte Maggio too is celebrated for a theft perpetrated by Napoleon, who took from thence to Paris two lovely frescoes by Giulio Romano, and replaced them with hideous daubs.

Urbino, the eagle nest of the Montefeltrian dukes, the quondam hereditary protectors of our little Republic, is a pleasant drive from San Marino, and there the artist and the antiquary can enjoy to the full the legacies of beauty which the art-loving Dukes of Urbino have left behind them.

Buried in a cleft of the Apennines, and approached only by a bridle path from San Marino, is the quaint village of Monte Cerignone. A high arched bridge over a mountain stream leads you into the town, and reminds you of the Ponte alla Maddalena near Lucca. And a grim square castle overlooks the town, once a favorite summer resort of the Urbino dukes. It is still rich in mouldering frescoes and beautiful specimens of Cinquecento work by skilful artists, who were summoned thither by the dukes to beautify their summer hiding place.

These and many others are the attractions offered by San Marino, where a spring or autumn month can be spent, combining as it does the rare advantage of sea breezes and pure mountain air together.—*Fraser's Magazine*.

INSECT CONSERVATISM.

SIR JOHN LUBBOCK will certainly earn the praise of accumulating more facts upon which we may find reasonable inferences as to the intellectual character of the Ant, than all his acute predeces-

sors in the same field put together. And his latest published observations on the subject, communicated to the Linnæan Society, and printed in their "Transactions," contain some of his most inter-

esting results. These results we should describe generally as showing that the ants display, first, a preternaturally keen sense of consanguinity; next, a good deal of that narrow conservatism which is so often the result of too much belief in the family and too little receptivity for the ideas of the external world; in the third place, a thorough distrust of revolution, so that they are almost equally afraid of establishing a new dynasty and of destroying an old one; and finally, a good deal of the scepticism which narrow conservatism inevitably engenders toward all suggestions not fitting easily into the established grooves. The ant, it is evident, does not, like Lord Beaconsfield, believe mainly in *race*, but, on the contrary, like the English squire, "acred up to his lips, consollid up to his chin," believes chiefly in family, and, we must add, has shown much more amazing instincts than any English squire in discriminating the progeny of one group of families from the progeny of another. That a strange ant, though of the same species, put into any nest, will be at once attacked and killed, Sir John Lubbock has proved again and again. Like the English rustic who, on assuring himself that a man is a stranger to the district, immediately proposes to "'eave 'alf a brick at him," the ants pay no regard to species at all, if they find an ant who cannot trace his descent to their own nest intruding upon it. They make a principle of hostility to aliens, drawing no distinction between aliens of their own species and aliens of another species. But the remarkable thing appears to be their special instinct for identifying the descendants of their own tribe. Sir John Lubbock separated into two parts, in February, 1879, a nest of ants which contained two queens, giving about the same number of ants and one queen to each. In February the nest contains neither young nor eggs, so that the division was made before the earliest stage of being for the next generation began. In April both queens began to lay eggs. In July Sir John Lubbock took a lot of pupæ from each division, and placed each lot on a separate glass, with attendants from the same division of the nest. At the end of August he took four previously marked

ants from the pupæ bred in one division and put them into the second division, and one previously marked ant from the pupæ bred in the second division and put it into the first; in both cases the ants, which could never have been seen in any stage of their life by any of the ants in that division, were welcomed as friends, cleared of Sir John's paint, and accepted as members of the family. The same thing happened again and again. But whenever a stranger was introduced after the same fashion, it was immediately attacked and destroyed. This confirmed still more remarkably a series of less crucial experiments formerly made by Sir John Lubbock on the same subject. By some inscrutable sense or other, the ants, it is clear, know the descendants—at least in the first degree—of those which have once belonged to their own nest, even though they were neither born nor thought of when their parents left the nest. So much for the profound instinct of consanguinity in the ant, as well as for the unconquerable hostility they show to those ants who are not connected with them, within recognizable degrees at least, by blood.

But now as to the intense political conservatism which this bigoted sort of family feeling produces. Sir John Lubbock has discovered, it appears, that once let an ants' nest get accustomed to living without a queen—once let it organize democratic institutions—and nothing will induce it to admit a queen for the future. Queens introduced into queenless nests were always ruthlessly killed, even though in one case Sir John exhibited the queen for three days to the ant-democracy in a wire cage which protected her from them, in order to accustom them to the sight of royalty. The moment the protecting wire was removed, the queen was attacked and slain, just as if she had been an ordinary alien. Sir John, however, was occasionally able, by the help of a little intrigue—of the Marshal MacMahon kind but more successful—to obtain a throne for a wandering queen. The way he managed was this. He took a few ants from their nest, and put them, in that disorganized state, with a strange queen. The ants were then in a timorous and diffident mood. They had no fixed institutions to fall back upon. They felt

wanderers in the world. And feeling this, they did not attack the queen, but rather regarded her as the nucleus of a possible organization. By thus gradually adding a few ants at a time to a disorganized mob which had accepted the queen as the starting-point for a new polity, "I succeeded," says Sir John Lubbock, "in securing the throne for her." But this success speaks as much for the conservatism of the ants, as the former unanimous rejection of the queen by an organized community. They repudiated a queen when they knew that their institutions were in working order without her. They accepted her, when they felt at sea and in peril of anarchy, as the germ of a new system. It was a timid conservatism which dictated their policy in each case. In the former, they rejected with horror the prospect of a change of constitution; in the latter, they accepted, not, perhaps, without eagerness, the prospect of a more rapid political development than, without any ready-made leader, they could have counted upon. For the ants then, the throne was, as M. Thiers said of a Republic, under dissimilar circumstances, the constitution "which divided them least."

And it is to be inferred, we think, that the languid scepticism which is one of the commonest causes or effects—it is difficult to say which—of that intense timidity which is so often connected with Conservatism, affects these wonderful little creatures also. Sir John shows us most satisfactorily that the ants understand each other—that when an ant goes back from a bit of food which she is unable by her own strength to stir, she can and does communicate in some way to her fellow-ants the need of help. They clearly understand her message, and they prepare to assist her; but they have, it appears, no real confidence in her information. What they see with their own eyes fills them with the utmost eagerness, but what they learn from others they do not more than half believe. They usually go with the messenger, but they go without any real *clan*, without any of that earnestness which they display after getting personal experience of the existence of the store of food. After that they are all urgency. After that they outrun their

fellows, and cannot reach the store of provisions too soon. But on the hearing of the ear they act with the utmost languor. They follow, but so slowly that they never keep up with their eager guide, soon drop behind, and generally give up the expedition, as one beyond their courage or strength, or at least too much for their half-faith. Let us hear Sir John's curious delineation of the sort of authority which one ant's information appears to carry to his fellow-ants:

"I selected a specimen of *Atta testaceo-pilosa*, belonging to a nest which I had brought back with me from Algeria. She was out hunting about six feet from home, and I placed before her a large dead bluebottle fly, which she at once began to drag to the nest. I then pinned the fly to a piece of cork, in a small box, so that no ant could see the fly until she had climbed up the side of the box. The ant struggled, of course in vain, to move the fly. She pulled first in one direction and then in another, but, finding her efforts fruitless, she at length started off back to the nest empty-handed. At this time there were no ants coming out of the nest. Probably there were some few others out hunting, but for at least a quarter of an hour no ant had left the nest. My ant entered the nest, but did not remain there: in less than a minute she emerged, accompanied by seven friends. I never saw so many come out of that nest together before. In her excitement the first ant soon distanced her companions, who took the matter with much *sang-froid*, and had all the appearance of having come out reluctantly, or as if they had been asleep and were only half awake. The first ant ran on ahead, going straight to the fly. The others followed slowly and with many meanderings; so slowly, indeed, that for twenty minutes the first ant was alone at the fly, trying in every way to move it. Finding this still impossible, she again returned to the nest, not chancing to meet any of her friends by the way. Again she emerged in less than a minute with eight friends, and hurried on to the fly. They were even less energetic than the first party; and when they found they had lost sight of their guide, they one and all returned to the nest. In the mean time several of the first detachment had found the fly, and one of them succeeded in detaching a leg, with which she returned in triumph to the nest, coming out again directly with four or five companions. These latter, with one exception, soon gave up the chase and returned to the nest. I do not think so much of this last case, because as the ant carried in a substantial piece of booty in the shape of the fly's leg, it is not surprising that her friends should some of them accompany her on her return; but surely the other two cases indicate a distinct power of communication. Lest, however, it should be supposed that the result was accidental, I determined to try it again. Accordingly, on the following day I put another large dead fly before an ant belonging to the same nest, pinning it to a piece of cork as before. After trying in vain for ten minutes to

move the fly, my ant started off home. At that time I could only see two other ants of that species outside the nest. Yet in a few seconds, considerably less than a minute, she emerged with no less than twelve friends. As in the previous case, she ran on ahead, and they followed very slowly and by no means directly, taking, in fact, nearly half an hour to reach the fly. The first ant, after vainly laboring for about a quarter of an hour to move the fly, started off again to the nest. Meeting one of her friends on the way she talked with her a little, then continued toward the nest, but after going about a foot, changed her mind, and returned with her friend to the fly. After some minutes, during which two or three other ants came up, one of them detached a leg, which she carried off to the nest, coming out again almost immediately with six friends, one of whom, curiously enough, seemed to lead the way, tracing it, I presume, by scent. I then removed the pin, and they carried off the fly in triumph. Again, on June 15th, another ant belonging to the same nest had found a dead spider, about the same distance from the nest. I pinned down the spider as before. The ant did all in her power to move it; but after trying for twelve minutes, she went off to the nest. For a quarter of an hour no other ant had come out, but in some seconds she came out again with ten companions. As in the preceding case, they followed very leisurely. She ran on ahead, and worked at the spider for ten minutes; when, as none of her friends had arrived to her assistance, though they were wandering about evidently in search of something, she started back home again. In three quarters of a minute after entering the nest she reappeared, this time with fifteen friends, who came on somewhat more rapidly than the preceding batch, though still but slowly. By degrees, however, they all came up, and after most persevering efforts carried off the spider piecemeal. On July 7th I tried the same experiment with a soldier of *Pheidole megacephala*. She pulled at the fly for no less than fifty minutes, after which she went to the nest and brought five friends exactly as the *Atta* had done."

Can anything be more remarkable than the extraordinary difference in the demeanor of the ants taught by personal

experience, and of the ants trusting to the report of another? Obviously, the latter had a very languid belief in the statements of their friends, just enough to make them enter on the enterprise, but not enough to make them prosecute it even so far as to hasten their pace, in order to keep up with their eager friend. Clearly, the ants are not very good judges of character. Their predisposition to distrust sanguine statements, like the predisposition of timid Conservatives in general, is so deep, that at the first obstacle they fall away, perhaps questioning the use of tasking themselves for news that sounds so improbable as that of a treasure-trove. Sir John Lubbock even reports one case in which a slave ant, of the *Polyergus* species, twice returned to her nest in search of co-operation in vain. Nothing she could say would induce her fellow-slaves to enter on a new bit of work, without better evidence of its remunerative character than a wandering fellow-servant's report gave them. Twice she returned alone to the unequal task, reproaching bitterly, no doubt, the faithlessness of her associates.

Those who doubt our reports of the extremely timid political caution of these insect tribes, will convince themselves that we are not exaggerating, if they will but refer to Sir John's very interesting account of these formican Conservatives—Tories they are not, for obviously there is no blatant element in the politics of the ants. Their democracy, when they are democrats, is the democracy of the Swiss Republic, not the democracy of the Imperialists, still less the democracy of the French Revolution.—*The Spectator*.

MUSIC AND THE PEOPLE.

BY FLORENCE A. MARSHALL.

Is England, as a nation, musical? Few questions can be the subject of more frequent and vehement discussion among us, the English people, ourselves; and by this very fact we point with an unconscious finger to our inherent weakness. *Qui s'excuse, s'accuse*. When would a German writer find it to his interest to indulge in long dissertations

to whether Germany is or is not a musical country, and to collect every scrap of evidence which may help to vindicate her claim to be so called? Until we have quite made up our own minds whether we think ourselves musical or not, we cannot be surprised if our continental neighbors politely pass us over in their musical calculations—po-

lately, we say, because we enter into these calculations as a business item, important exactly in proportion to the number of pounds sterling we are ready to pay for the article, music.

Certainly, if to hear much music, to have the first of European performers, and the luxury of paying the highest prices for them, could constitute a claim to a musical disposition, then England would be the most musical country in the world. Yet, were an earthquake to sweep away the whole of this musical fabric that we raise here with so much trouble and cost, what would the art lose? Imagine for a moment that the German race were to be blotted out from the face of the earth! We feel at once that music would be left like a watch without a mainspring. Nor could France, nor modern Italy, nor the Polish and Hungarian peoples, nor even Russia and Scandinavia, disappear without leaving a sensible gap somewhere. None of these but have produced artists or works of art whose influence has acted and reacted beyond the limits of the respective countries that gave them birth, and who, however various in degree and in quality of merit, may be called cosmopolitan. What does England contribute to the general store? A considerable number of musical executants—instrumental executants, vocal executants, and executants in composition. Not those phenomenal executants of whom the world possesses but a few, and who are, in their way, as truly creators in art as are great composers. But accomplished executants of a very high class, nevertheless, worthy of respect and of admiration.

Still, we cannot disguise from ourselves the unpalatable fact that the history of art would be unaffected by the disappearance from the world of the whole mass of this English execution. All we so far succeed in doing is in ministering (and that only in part) to our own needs. We do not enrich other nations.

And yet it is undeniable that there is in Great Britain an intense *wish* for music, seemingly rendered keener by the fact of its being an alien growth, and by its tardiness in taking root here. The craving has, as we know, persisted unabated for many centuries. We want

to naturalize the thing, like the potato-plant; for, short of this, we know it can have no vitality, no organic growth, or individual existence here. It has become as indispensable a luxury as our tea or coffee, and we can apparently as little make it grow here as we can these. We import and import, but each importation leaves us, in the main, where we were.

Still we go on, undaunted by difficulty. It is hard to believe that where so strong a wish exists, there is not also much latent capacity. Those of the cultivated classes who love and practise music have such a profound faith in its softening and elevating influence that they are beginning to exert themselves to bring its benefits within easy reach of all. The last few years have witnessed the rapid rise and spread of people's concerts, series of which have been started in London and some of the chief provincial towns by a sort of simultaneous impulse, and which, tried at first as experiments, have already in many cases developed into what seem likely to be permanent institutions. The success attending this remarkable movement has varied indeed in amount and in kind according to circumstances, but has unquestionably been great, and sufficient to set speculation at work as to the causes of the need for establishing such concerts, as it were, from outside. How is it that the demand which seems to exist, is inadequate to create its own supply? Why, seeing that the artisan classes enjoy music so much, have they hitherto made so little effort to get it for themselves? And the question naturally follows, "Will this existing state of things be permanently modified by these attempts to bring music to people who have not found it out for themselves? Will they make it their own, or still go on waiting till it comes to them?" It may help us in feeling our way to some sort of answer if we look, in the first place, at what is actually being done by a few of these societies.

Chief among London undertakings of the kind are the People's Entertainment Society, the Kyrle Society, and the People's Concert Society. These three differ somewhat from each other both in their aims and their methods of working.

The object of the first is expressed in its own prospectus as being "to provide good high-class amusement for the poorer classes in London during the winter, in the hope of withdrawing them from lower places of resort." It has, therefore, a distinctly philanthropic end; and while at the "entertainments," which are the means to this end, music is the chief, often the only attraction, others, such as readings, recitations, or even dramatic performances, have an occasional place. No less than sixty-six of these entertainments were given in the first four months of 1879, in some of the poorest districts in London, such as Lambeth, Westminster, Battersea, etc.; and during this last spring six or seven such concerts were being organized weekly by the society. At some places a small charge was made for admission, at others the entertainments were free; but in this, as in both the other societies mentioned, the bulk of the expense is met by voluntary subscriptions and donations from well-wishers. The performers at the concerts are amateurs, and professionals who generously give their services, or at most accept such remuneration as covers their expenses. Songs and ballads, interspersed with instrumental solos, and now and then a comic song, constitute the staple of the programmes.* This excellent undertaking has been rewarded by a most encouraging amount of success, the halls and rooms being, as a rule, well filled, and the audiences numbering several hundreds. The appreciation by these audiences of the efforts made in their behalf was shown at Battersea, in the presentation to the earnest and energetic treasurer (and founder) of the society of an address signed by 200 working-men, expressive of their pleasure and their gratitude.

Similar societies, in connection with this, have been recently started at Manchester and Winchester, with every prospect of success.

The Kyrle Society's expressed object is "to bring Beauty home to the people." While fulfilling a philanthropic purpose this is, therefore, an art society, and music is but one among the many forms of beauty with which it deals. Its musical branch consists of an amateur choir, formed for "the practice of ora-

torios, cantatas, and other choral works of the highest class, with a view to their gratuitous performance in churches, school-rooms, and halls situated in the poorest parishes of London." These performances are all free, as it is an integral part of the society's scheme to bestow "beauty" on the people as freely as nature bestows it. Between the beginning of 1878 and the present time sixty-six of them have been given, including oratorios, such as the "Messiah," "Creation," "Elijah," and many others (which when performed in churches have formed part of the religious service), and smaller miscellaneous concerts, some of them in hospital wards. All these have proved, and continue to prove, attractive to large numbers of the people.

The People's Concert Society aims at "the popularization of good music by means of cheap concerts." By "good" music is here to be understood classical music, and that instrumental. Songs are given, by way of variety, but the main feature of the programmes is concerted chamber music, quartettes and trios, such as are heard at the Monday Popular Concerts; with this difference, that only short portions of these works are performed at a time, so as not to tax too severely the attention of an untrained audience. Such programmes cannot compete with those of the music-halls, for they are not amusing; neither with oratorios, as they are not a form of devotion. This society, recognizing music as a good in itself, holds it out as its own reward. The concerts are not given gratis, but the prices of admission, varying from one penny to one shilling, make them accessible to all but the utterly destitute. Presenting music, as they do, in its severest, if also its purest form, they cannot hope to vie in wide popularity with the People's Entertainments; still the fact is encouraging that the society's second season has been more prosperous than its first. Between November and April last it had twenty-five concerts, among which the most successful were a series of six, given in the Chelsea Vestry Hall, and repeated in Bishopsgate School-room; and, more especially, three single concerts at the South Place Institute, Finsbury, all of which attracted numerous and apparent-

ly appreciative audiences. One of these Finsbury concerts was on a Sunday evening, when 1100 people were present. Admission was of course free, but a voluntary collection was made afterward, of which the results averaged twopence per head.

Considering the sort of music performed, its reception by the audiences was favorable beyond what could have been expected. It has occurred that every instrumental number in a programme has been encored; single concerted movements have been so on several occasions; while violin or violoncello solos, when first-rate, elicit unbounded enthusiasm. The last number in the programmes is always instrumental, and it rarely happens that these people leave before the last note. In this how unlike the upper classes! Many well-known artists have given their services, or accepted merely nominal fees; a boon to the society of which the importance cannot be overrated, as it has been abundantly proved that to make such music intelligible to such an audience a masterly performance is even more necessary than it is when the hearers are more musically cultivated.

Except, it may be, in cases of individuals, these concerts can hardly appeal to the very lowest and most degraded class. In instrumental chamber music there is little to excite or forcibly to arrest dull attention; while to follow it at all requires on the part of those to whom it is utterly strange, an effort of mental concentration which it is hopeless to expect from people struggling and toiling for mere existence. The degree of perfection in performance, too, which, as we have said, is requisite if the music is to be comprehensible, makes the getting-up of concerts a serious matter, and renders it impossible for this society to multiply its operations and centres with the rapidity of the itinerant societies. Its field must for a long time be more restricted, and its results in appearance less brilliant than theirs. But by sowing the seed of art for art's sake among the people, it strikes at the root of the state of things described as existing in this country. It should with perseverance become a permanent institution, putting within the people's reach the possibility not only of hearing, but themselves prac-

tising the music which affords to those who know it such pure and elevating pleasure; and which, once it obtains a footing among the people themselves, will make its own way and provide a source of growing interest which may in time prove the most fatal of all rivals to lower forms of amusement. It can never compete with these on their own ground, but by withdrawing from them gradually those who are capable of better things, it must in the end raise the general standard of enjoyment.

It is not always easy to recognize the fact that there is something antagonistic in philanthropy and art. The essence of art is freedom and self-development, though there may be that voluntary subordination to a higher rule which is not incompatible with these. Practical philanthropy aims at making men better than they are, it may be by legislation, by persuasion, by inducement, but its end is always modification. No nation is so distinguished by the philanthropic spirit as the English, and a most admirable spirit it is, but not the soil most favorable to the growth of art. When concerts are presented to people as something good for them, a moral duty rather than a privilege seems involved in frequenting them. It lies at the root of so much that is done and so much that is not done in England, this doing nothing for its own sake, but for some secondary object to be gained by the doing it, some advantage, abstract or concrete, terrestrial or celestial. The object may in itself be all that is desirable, but it does not seem naturally to occur to us that by this direct aiming at it we may destroy or invalidate the most effectual means of bringing it about. Direct philanthropic action, like direct legislation, may counteract certain manifestations of evil influences, but does not necessarily tend to modify the condition of things which has brought these weeds into existence, and will produce fresh crops as fast as the first are removed. The soil must be prepared, as well as the seed of better things sown.

We are said to be, as a nation, unsocial; and it is very true that the poorer classes do not here, as in Germany, find relaxation after the labors of the day by meeting together to make music in concert. Apart from the fact that the Ger-

man standard of general education is higher than ours, there are many reasons for this. Our climate in great measure forbids outdoor recreation, while the crowding of the vast masses of poor in our great cities makes social meeting in their own homes impossible to our people. On this subject we would refer our readers to an interesting report of parish work in Whitechapel (1878-9), by the Rev. S. A. Barnett, than whom no man has done more to raise and educate the people under his charge. Whether his work finds as yet its due recognition we know not, but it is the kind of work that leaves permanent traces behind it. He writes: "From company, from social intercourse, the mass of the people is cut off. . . . No one can know the lives of our people without seeing their dulness, and many of us see in such dulness an excuse for their wild courses;" while farther on he testifies to the fact that "there is nothing which people find so interesting as their fellow-creatures." It is manifest that no place affords this interest to poor people but the public-house, of which it is to many the greatest attraction. To dwell on the numberless dangers and temptations to which the better sort of men are here exposed would be superfluous.

Now music, as if to make up for being the most abstract and ideal of all the arts, requires for its *materialisation*, so to speak, more active co-operation than does any other one of them. In order to have an objective existence at all, it has, on every occasion of its presentment, to be re-created by performance. This gives it, for English people, at once an advantage and disadvantage as compared with other arts. Our practical nature is not the stuff of which good audiences are composed for works requiring brain-abstraction in the listener. On the other hand, it does afford the very best material for active realization, and even a little actual practice in music goes a long way in facilitating the effort of listening, besides giving the natural human interest of a possible personal participation in the kind of thing performed. No doubt this is one reason of the wide popularity of oratorio, which is greater here than in any other country. Not the only reason. The uneasy conscientiousness to which we have alluded

as an element unfriendly to art development finds in oratorio peace and repose. In the country especially, where the parochial clergy are foremost in all collective gatherings for educational and recreative purposes, there are numbers of people, the inheritors of puritanical principles, who cherish a distrust and dislike of anything theatrical, to whom an opera-house is *terra incognita*, and who have an uncomfortable feeling about any art pursuit when it is quite dissociated from their own form of religious service. All the artistic and musical aspirations of this class are resumed and expressed in the oratorio. They go up once or twice a year to hear the "Messiah" or "Elijah" at Exeter Hall, as the Jews went up to worship in the Temple at Jerusalem. But even this would not sufficiently account for the vast comparative popularity in England of works of this sort without the fact that in these, and these only, some social co-operation is realized in art work. More of whatever capacity and love for music may be innate in us has been elicited by choral societies than by any other influence. This choral music is loved because it is *known*; it can be appropriated and understood, for all take, or have taken, or might take, an active share in it. When this feeling, now limited almost entirely to vocal works, extends to instrumental, there may be popular audiences here for symphony concerts.

No society has recognized this fact so distinctly, and made so sagacious and practical a move in its direction, as the Birmingham Musical Association. In the winter of 1878-9, Mr. Collings, M.P., the then Mayor of Birmingham,* gave a series of four free concerts to members of the artisan class, with the double purpose of affording pleasure to his fellow-townsmen and of ascertaining how far good music would be attractive to those who had previously had few opportunities of enjoying it. The results were in the highest degree encouraging, about 3000 persons being present on each occasion. A public meeting was called to consider the matter, which resulted in the establishment of

* To him, as well as to the secretary of the society, we are indebted for full information, courteously given to us, of its proceedings.

the Birmingham Musical Association. Two objects were to be achieved, if possible.

1. "The provision of cheap concerts of a high class, which, it was believed and hoped, would be self-supporting." Toward this end great advance has already been made. Between November 8th, 1879, and April 24th, 1880, a series of twenty-two concerts was given. The music at these concerts was of various kinds. Birmingham is rich in musical resources, and not being so vast as this unwieldy London, which can only be worked by districts, it can afford to concentrate these resources on one undertaking. Some were ballad concerts, varied by harp, organ, or violin solos, or by vocal glees. Many were of the choral kind dear to people's hearts. Several choirs—the Festival Choir, the Birmingham Philharmonic Union, and Amateur Harmonic Association, and many more—assisted on different occasions, performing selections from the best oratorios; cantatas, glees, and part-songs. On other evenings Mr. Stockley's band was the attraction, when such works were given as the overtures to *Oberon* and *Masaniello*, the ballet music from Schubert's *Rosamunde*, and Rubinstein's *Feramors*, the introduction to the third act of *Lohengrin*, Meyerbeer's *Coronation March*, and Beethoven's *First Symphony*; these being interspersed not only with ballads and *Volkslieder*, but with songs by Handel, Mendelssohn, and Beethoven. Many of the tickets (price 6d. and 3d.) were sold, by permission, at coffee-houses, and in this manner reached the right class of persons. On some occasions all tickets had been disposed of on the day before the concert, and on many evenings hundreds of people were turned away before the doors were opened.

2. The second object proposed by the association is "the establishment of popular classes for musical instruction, both vocal and instrumental, with the addition of a musical library, so varied as to include the compositions of all the great masters, so copious as to afford a sufficient number of practice parts, and so accessible as to bring within the reach of all classes music

hitherto unattainable except at serious cost."

How this splendid project will work can only be shown by time, and remains yet to be seen. Here, however, we seem to have the suggestion of what most of all is wanting, the co-operation of all classes in one object for its own sake. Of all influences adverse to our end, none is perhaps so fatal as the prevalence of endless class distinctions, and nowhere are these so complex nor so aggressive as in our "democratic" country. In Germany the broad line of demarcation between the nobility and the "people" saves a good deal of trouble by dividing the world in two well-defined sections. But here, where professional people fight shy of shopkeepers, where large shopkeepers will not send their children to school with those of small shopkeepers, nor small shopkeepers theirs with those of artisans, where farmers' daughters and squires' daughters have distinct "circles," where every one knows that nothing prevents him from rising any number of grades in the social scale—if he can, where each man, and still more each woman, is on the defensive lest he or she should be suspected of associating on equal terms with any one in a "lower set"—what chance here is there for an art which neither knows nor recognizes any of these things? If we are to combine in musical art work, all sense of favors conferred or received must be put aside. What is wanted is association; and unless the upper classes are finally to be excluded from progress, the example must emanate from themselves.

In these centres where concerts are established for introducing to the people a kind of music as yet utterly new to them, can nothing be done toward putting such people *en rapport* with what they are to hear? We constantly hear complaints from people of leisure, women especially, of lack of scope for their powers or their energy. In this attracting and drawing together of the atoms of our masses of poor, there is work for any number, if rightly set about. The choral societies are doing a great deal, but in the large cities, and above all in London, there are vast

numbers of the population quite beyond their reach, and much remains to be done that is not even attempted. We do not want only to beg people to come and hear us, but to put them in the way of doing for themselves what we now do for them. We should like to see such a possibility established in every important concert centre, in the shape, to begin with, of a singing-class for imparting the rudiments of musical knowledge. Trained teachers should be appointed to these classes, for to do such work efficiently requires knowledge and experience. But the labor would be lightened and the impetus of the movement tenfold increased if amateurs would associate with the work by themselves joining such classes and singing too. If the teaching were good, this would be very instructive to those who did so join; there are plenty of men in the upper classes to whom it would be as improving as to their artisan brothers; while ladies whose musical education is limited, as too often it is, to the mere finger-practice of the pianoforte, would materially gain by such association.

But besides this, if we expect working-people to come and listen patiently to instrumental music, after the novelty of the thing has worn off, we should find some associations, be they at first on ever so humble a scale, for concerted instrumental practice. The conductor should be a good practical musician, either professional and paid out of the society's funds, or an amateur fit for the work and able to devote himself to it. Some competent person, too, should be "retained" for the piano, which would be necessary, at any rate at first, to fill up blanks in so elementary an orchestra. A room with a piano in it should be hired for, say, one or two evenings a week; a few special fittings for this room, desks, etc., would be required. It should then be made known in the neighborhood that any man who can play on an instrument is welcome on such and such evenings for concerted practice; perhaps some nominal fee might be charged as condition of membership and toward defraying expenses. If this appeal were responded to, it would be necessary to separate those who came into two classes: those who

may have some knowledge of reading music at sight, and those who play by ear only. For those who desired it, of these last, special extra instruction might be provided. The music would probably have at first to be arranged to suit the materials. From simple melodies purely harmonized, it might be possible soon to proceed to arrangements of easy overtures and symphony movements. Here, again, if our amateurs who can read and play "a little," and especially some of those many gentlemen who now learn to play on the violin and other orchestral instruments, would associate themselves with such practice, they might turn their smattering of knowledge to the best account, and most effectually help themselves in helping others who have not had their opportunities.

It is probable that the nucleus of a sort of orchestra might soon be formed in this way. When we come to inquire, it is astonishing how many men in the artisan class *can* play a little on some instrument or other—cornet, saxhorn, flute, concertina, nay even violin or violoncello. A "sister" engaged in hospital work at Clewer states that in the male wards they have had, at different times, numbers of men who played such instruments. On some occasions, when there has been an unusual amount of "talent" among the convalescent patients, they have got up concerts among themselves with great success. But what was performed? Solo tunes on the various instruments, and songs. Nothing, beyond perhaps a "Christy Minstrel" chorus in unison, was attempted in the way of *ensemble*. Each individual showed off in his own individual manner. All this, with organization and perseverance, might be made available for better purposes. How constantly in some English circles is music still spoken of as a kind of snare, likely to lead men who are its devotees into "low company." In all ranks it is true that men who possess any accomplishment by means of which they can amuse their fellows are generally popular, especially among idle people; and when a working-man sings his songs or plays his tunes to his companions in the public-house, no doubt the situation is fraught with some peril, to say nothing

of the temptation to undue vanity in the performer! But it would be strange indeed in Germany, where music is a serious thing, to hear such an allegation made against it.

From time to time information comes from various parts of the country, all tending to confirm the belief that such a movement as here has been vaguely shadowed forth is on foot, and slowly but surely making its way. Some facts with regard to the county of Fife in particular are so remarkable as to be worth quoting.

"Great interest is felt in music by the lower classes. There are musical associations in almost every town and village. A committee of gentlemen and others is formed in each such town to make arrangements with an Edinburgh conductor or local professor, and weekly practices are held under his leadership during the winter season. Through these associations the lower orders—fisher people, mill girls, foundry lads—have opportunities of cultivating their taste and developing their voices. In Dunfermline and Kirkcaldy, where the societies are very large, they engage a good Edinburgh orchestra for the public performance. In the fishing village of Anstruther the conductor and members of the orchestra are amateurs and trades-people, the chorus-singers and soloists are chiefly fisher people. At Leven, in a population of 2000, there are between seventy and eighty members in the Choral Union. These people read well, mostly from the old notation. Solos in the oratorios are invariably sung by amateurs of all classes. Many of the rank of dressmakers, milliners, and small tradesmen, spend much of their leisure time in getting up these solos and songs for the frequent amateur concerts. There are some very beautiful voices among them; and in some of the girls, and men also, the talent for singing is so great that without instruction they sing their Handelian 'runs' with the required distinct vocalization. Glee clubs, too, are formed, independently of the Choral Union. The Scotch precentor is often a good musician, competent to train a choir, to sing glees and part music, not only correctly but with taste."

These details are interesting, both in

themselves and as furnishing hints which may be widely useful. Here in Fife-shire natural capacity and universal co-operation have quietly and without any fuss established music, vocal music at any rate, on a firm popular footing, from which it may proceed to do great things in time. It needs not external support, it does not require to be preached as a crusade, it has become an indigenous, abiding, and elevating interest.

But the working-classes of London and our vast crowded cities, in the fierce struggle for existence, labor under social and physical disadvantages for such a pursuit unknown in remote counties, unknown even in quiet German towns. It is not to be wondered at if help, unnecessary there, is wanted here. But association is the only form of help that will be productive of permanent good. Unless this is attained, we might as well plant a garden by plucking flowers from another garden, sticking them in the ground and expecting them to grow, as go on calling to people to listen to what they cannot or do not share in.

Let nothing that has been said be understood as casting a slur on what has been described as practical philanthropy, nor as depreciating any one of the noble efforts of disinterested men and women to better the condition or raise the mental and moral standard of their suffering fellow-creatures. The purest art and the highest philanthropy are truly one. But, in these things, cause and effect do not follow each other in the anticipated, nor even in the desired, order. The self-devotion of the philanthropist results in even greater good to himself than to those for whom he labors. The artist who has striven to give adequate expression to a grand thought knows how far his execution has fallen short of his conception, and is disappointed; the gainers by his work are those whom it inspires with his idea. The tendency of philanthropy is toward introspection in its subjects; it invites men to consider themselves with a view to improving themselves. Art points to something beyond and greater than themselves. In aspiring to the highest good men must become better, but only so long as they forget themselves in their object. Of all the great art creations

which now serve the ends of philanthropy, not one could have resulted from any amount of calculation, or of conscience, or indeed of culture. The seer simply declares what he beholds, and the artist translates his idea, as best he may, into his own form of art; but the artist who looks away from his ideal to contemplate himself misses his mark, and the student who utilizes art as a mere tool for self-improvement defeats his own object. All noble and ennobling art has been, and must be, followed for its own sake.

When we look back on the advance music has made in England since the beginning of the century, it seems wrong to take an unhopeful view. Only all our advance seems to be in the representation of the already presented. Not till music has become the speech of the people will it find anything fresh to say.

Not till that has come about will the most heaven-born genius, should he appear among us, have much chance of recognition or appreciation unless first exported and returned to us with a foreign seal. It may well be that the future of English music lies in the success and the spread of the movement which, in some of its phases, we have described. Till then we seem only to fashion a lovely statue, as Pygmalion did; we add grace after grace and finish after finish till it is all but life-like. We exclaim in delight as we recognize again and again the features and the smile that we have dreamed of—that we know. But in vain we kneel and worship and invoke—in vain, so far. The smiling statue is still a statue. It does not descend from its pedestal; it will, as yet, not live for us.

—*The Nineteenth Century.*

A MADRIGAL.

BY AUSTIN DOBSON.

I.

BEFORE me careless lying,
Young Love his ware comes crying;
Full soon the elf untreaures
His pack of pains and pleasures—
 With roguish eye
 He bids me buy
From out his pack of treasures.

II.

His wallet's stuffed with blisses,
With true-love-knots and kisses,
With rings and rosy fetters,
And sugared vows and letters—
 He holds them out
 With boyish flout,
And bids me try the fetters.

III.

Nay, Child (I cry), I know them;
There's little need to show them!
Too well for new believing
I know their past deceiving—
 I am too old
 (I say) and cold,
To-day, for new believing!

IV.

But still the wanton presses,
 With honey-sweet caresses,
 And still, to my undoing,
 He wins me, with his wooing,
 To buy his wares
 With all their cares,
 Their sorrow and undoing!—*Belgravia Magazine.*

LITERARY NOTICES.

UNCLE REMUS: His Songs and His Sayings. The Folk-Lore of the Old Plantation. By Joel Chandler Harris. With Illustrations by Frederick S. Church and James H. Moser. New York: D. Appleton & Co.

In his graceful introduction to this remarkable book, the author seems somewhat disposed to protest against its being looked upon as a humorous production, declaring, that no matter how humorous it may be in effect, its intention is perfectly serious. However this may be, and heightened perhaps by its transparent good faith and objective realism, humor is its dominant characteristic, and to this no doubt is largely due the very wide popularity which it has already achieved. For readers of our day, at least, there is no literary quality so certain to prove attractive as humor; and the humor of Uncle Remus is of a peculiarly quaint, racy, genial, and laughter-provoking type. It pleases by its very freshness and spontaneity, and by the contrast which it thus affords to the artful, self-conscious, elusive, and carefully cultivated humorlessness which modern writers have drilled themselves to supply in obedience to the universal demand.

The truth is, however, that Mr. Harris's book appeals to three distinct and separate classes of readers. For children, the semi-mythical, semi-realistic stories of Brer Rabbit, Brer Fox, Brer Wolf, Brer Tarrypin, Brer Tukky Buzzard, and the rest, possess the romantic fascination that pertains to all genuine folk-lore and nature-myths. Grown-up readers are charmed by the humorous flavor of which we have spoken, and by the homely good sense, the shrewd observation, and the gleams of poetic imagination which are revealed by the songs and the sayings as well as by the stories. And already ethnologists have begun to perceive that as contributions to myth-literature the plantation legends are likely to prove of no slight value, and to suggest questions of profound significance in regard to race origins and relationships.

To estimate in detail the relative weight of these several considerations would require

more space than we can spare; but to our mind the feature which will be found to contribute most to the permanent value of the book is the light which it throws upon the essential character of the negro, his outlook upon life, and his conception of men and things. We hardly exaggerate when we say that, from this point of view, it is by far the most important outcome of that concentration of interest with which the negro has been regarded in this country during the past two or three generations. "Uncle Tom" was produced by Mrs. Stowe as the camel was produced by the German—he was evolved from the depths of her consciousness, and represents nothing but the creative power of a realistic imagination suffused with intense feeling. "Uncle Remus" is the actual, living, typical plantation negro, whose personality gave (and still gives, we hope) a flavor and picturesqueness of its own to plantation life in the South, and whose figure is recalled with a half-humorous, half-tender regret by the great majority of Southerners when looking back in memory upon the scenes and experiences of their childhood. The skill with which Mr. Harris has portrayed and illustrated this many-sided character proves him to be an artist of a high order; and, if we are not mistaken, he has added a permanent figure to the great portrait-gallery of literature.

In any event, it must be regarded as a happy augury that some of the most successful—successful in the highest and widest sense—of recent American books have been produced by Southerners. Mr. Cable has taken his place unchallenged in the foremost rank of American novelists, and Mr. Harris's work, modest and unpretentious though it is, is worth a whole shelf-full of such stories as Miss Augusta J. Evans's, or even those of Christian Reid.

YOUNG IRELAND: A Fragment of Irish History. 1840-1850. By Sir Charles Gavan Duffy, K.C.M.G. New York: D. Appleton & Co.

After a lapse of nearly forty years Sir

Charles Gavan Duffy, one of the leaders of the "Young Ireland" party whose agitation nearly produced a civil war in Ireland a generation ago, narrates the history of the events in which he took part, and paints the characters and explains the motives of the patriots who, with himself, played the leading rôles. His object is to make the history of the past throw light upon the difficulties of the present, to show how the same sufferings and grievances are producing the same results to-day that they have always produced, and to explain why when England is prosperous and contented Ireland is convulsed in the throes of civil discord. He writes without passion, though dealing with questions and events about which he evidently feels as deeply as ever; his arraignment of the policy of the British Government toward Ireland is severe and trenchant but never descends to the level of mere invective; his arguments are nearly as unimpeachable as his facts; and there can be no doubt that his able and interesting book will really contribute something to the solution of difficulties which might well be thought to baffle the efforts of peaceful statesmanship.

The present volume only covers the period from 1840 to 1845; but, though yet incomplete, the work has made a profound and favorable impression upon the English public. Says the *London Spectator*: "Never did any book appear so opportunely. But, whenever it had appeared, with so lucid and graphic a style, so large a knowledge of the Irish question, and so statesmanlike a grasp of its conditions, it would have been a book of great mark. We have come round now to a different point on the ascending spiral curve on which the history of English and Irish relations might be traced, and all the old difficulties are meeting us again in a form materially different indeed, but not fundamentally different, from that of thirty-five years ago. It is all the more instructive to read these vivid and eloquent pages, that the personal relations involved are so different, while the political relations are so closely similar."

Whoever wishes to understand the sentimental as well as the practical side of the Irish grievances which are now thrusting themselves so obtrusively upon the attention of the world should read this book.

THE YOUNG FOLKS' ENCYCLOPÆDIA OF PERSONS AND PLACES. By John D. Champlin, Jr. With Numerous Illustrations. New York: Henry Holt & Co.

The same merits which characterized the "Young Folks' Cyclopædia of Common Things" is also possessed by the present work, which is a companion volume, prepared

upon the same plan by the same author. The earlier volume, we may remind the reader, included in its scope only things in nature, science, and the arts; and this later one comprises accounts of the most noted persons and places, both real and fabulous. The two together cover the usual range of cyclopædic knowledge, and constitute a work which should be in every school library, in the hands of every teacher, and in every family where there are children. During the past year we have in our own family applied some pretty severe tests to the practical utility of the earlier volume, and have proved that a quite young child can readily be taught to refer to it for answers to those innumerable questions with which young folks are apt to pester and puzzle their elders. We have proved, too, that the superior completeness and precision of the answers thus obtained is appreciated by a child quite as much as it would be by those more accustomed to the use of such works. Quite apart from the importance of the information thus acquired, the value of the habit formed in this manner can hardly be overestimated in the mental training of the young. The scanty use made of works of reference, in ordinary households, even when the works are at hand, can only be attributed to the fact that in most cases the habit of such use was not acquired in the early or plastic stage of experience; and if the "Young Folks' Cyclopædia" did nothing more than accustom children to consult it in their perplexities it would render valuable service to the cause of education.

The present volume is much larger than its predecessor and is much more copiously and satisfactorily illustrated, containing maps and charts, as well as portraits and other pictures. A very valuable feature is the pronunciation of the proper names, which is indicated not by confusing and misleading diacritical signs, but by the use of the simple letters of the alphabet combined with a careful system of syllabification and accentuation. This feature renders the book as valuable to grown people as to children, for it is precisely the pronunciation of proper names which in general it is hardest to get at.

There are other features which will serve to render the book as satisfactory to parents as to children, and it may be said in brief that the "Young Folks' Cyclopædia" will meet the requirements of all who are in search of a compact, untechnical, and plainly-written dictionary of general knowledge.

THE STUDENTS' LAW DICTIONARY. By S. S. Peloubet. Second Edition, Revised and corrected. New York: Dossy & Co.

A COLLECTION OF LEGAL MAXIMS IN LAW AND

EQUITY : With English Translations. By S. S. Peloubet. New York : George S. Diossy.

Though designed primarily for the legal profession, these little books are not without value and interest for laymen. The law touches upon life at so many points that there are numerous occasions when even the ordinary reader would find it convenient to have at hand a glossary of the words and phrases used in legal papers and documents, with concise and trustworthy definitions of them ; and in his "Students' Law Dictionary," Mr. Peloubet has prepared just such a work in remarkably compact and convenient shape. The full title of this useful little work is "The Students' Law Dictionary of Words and Phrases in Law Latin, Law French, and Anglo-Saxon, with statutory and common law definitions, together with definitions of terms and expressions used in the code of civil procedure ;" and its practical value is indicated by its passing so quickly into a second edition.

The purpose of the second work is as the author says, "to collect in a small compass all the principal legal maxims in law and equity which are found scattered through the various law-books, giving under each an approved English translation. It is intended for the student preparing for the bar, and for the practising lawyer who may desire to find a maxim which will apply to, and illustrate, the case before him." The collection is at once compact and comprehensive, the arrangement is good, the translations appear to be in general fairly apt and literal, and a topical index at the end enables the student to find the maxims upon any subject that may happen to have been included.

The style in which the little books are issued commends them at once to the eye and the pocket.

CERTAIN MEN OF MARK. Studies of Living Celebrities. By George Makepeace Towle. Boston : Roberts Bros.

Into this compendious little volume, Mr. Towle has gathered biographical sketches of Gladstone, Bismarck, Gambetta, Lord Beaconsfield, Castelar, Victor Hugo, John Bright, and the Emperors William of Germany, Alexander of Russia, and Francis Joseph of Austria. The sketches are almost too slight for publication in book form, and would seem more naturally to find place in a magazine ; but they are excellent as far as they go, and the only fault the reader is likely to find with them will be on the score of their brevity. Mr. Towle has seen most of the celebrities with whom he deals, and his personal descriptions and anecdotes give an animation to his pages which such sketches do not usually possess.

FOREIGN LITERARY NOTES.

It is rumored that Brugsch-Bey is rewriting his famous pamphlet on the Exodus.

PROF. HUXLEY is, we are glad to hear, to contribute a volume on *Berkeley* to the "English Men of Letters" series edited by Mr. John Morley.

THE eleventh volume of the *Archives de la Bastille*, just published under the editorship of M. Ravaisson, contains some documents relating to Avedick, Patriarch of the Armenians at Constantinople, who has been identified by several authors with the Man in the Iron Mask.

A NEW work of Goethe has lately been discovered by Prof. Arndt, of Leipzig. It is in prose, and fills only a small number of pages in the MS. It belongs to the species of "Sing-spiel," a sort of pastoral play, intermixed with little bits of verse and songs. It is hoped that it will be published shortly.

It is announced that Von Ranke is about to publish with Messrs. Duncker and Humblot, of Leipzig, the first volume of a Universal History (*Weltgeschichte*), which is to be rather a Philosophy of History than a history in the strict sense of the word. The first chapter will be entitled "Ammon-Ra, Baal, and Jehovah."

E. SCHWEIZERBART, of Stuttgart, advertises a complete edition of Mr. Darwin's writings ("Ch. Darwin's Gesammelte Werke"), to be completed in fifty weekly parts, with 143 wood-cuts, seven photographs, and a portrait of the author. The series will afterwards be issued in six volumes. The publication opens with the "Voyage of a Naturalist."

A PROJECT has been started for marking, by some suitable monument, the spot where the corpse of Shelley was burned in 1822 on the sea coast near Viareggio. Some gentlemen belonging to Shelley's own college in Oxford, University College, whence he was summarily expelled in 1811, are taking the first steps in this matter : a fitting and laudable act of expiation.

MESSRS. GEORGE BELL AND SONS are about to publish an illustrated work on "Bookbinding of all Ages," in which examples will be given from the libraries of Maioli, Grolier, Henri II. and Diana of Poitiers, President de Thou, and other celebrated collectors. It will also contain specimens of the workmanship of Clovis Eve, Le Gascon, Dérôme, Padeloup, and other noted binders. The work is edited by Mr. Joseph Cundall, who read his first essay on bookbinding at the Society of Arts just thirty-three years ago.

At the last meeting of the Royal Society of Literature, Mr. F. G. Fleay read a paper entitled "The Living Key to English Spelling Reform now found in History and Etymology." The object was to show that the objections to spelling reform are principally founded on an exaggerated estimate of the amount of change required. Mr. Fleay, on the other hand, proposed a scheme which was developed in two forms—one, perfectly phonetic, for educational purposes; the other differing from this only in dropping the use of the accents, and the one new type required in the former. He showed that even in the vowel sounds not one-tenth would need alteration; while in the case of the consonants the alteration required would of course be much less.

MR. GOSTWICK, already known as a writer on German literature, is preparing for publication a book entitled "German Culture and Christianity." It is intended to give in outline a history of the main controversy in which, for more than a century, German culture—especially in philosophy and Biblical criticism—has been engaged in opposition to certain Christian tenets. The chief aim of the book is to show that the attack, masked at times by various auxiliary movements, has always been directed mainly against the central tenet of Christianity. The history begins shortly before the time of Lessing, and ends with the date 1880.

THE issue of typographical and illustrated works of a costly and "luxurious" character is as yet too perilous an enterprise in Spain to be of frequent occurrence. Publishers are chary of risking capital in such speculations. Still, the presses of Madrid and Barcelona have turned out illustrated works of considerable artistic as well as typographical merit. It is proposed to publish at Madrid an edition of some of the poems of Señor Nufiez de Arce, illustrated by Domingo, Jimenez y Aranda (José), Raimundo Madrazo, Melida, Palmeroli, Plasencia, Pradilla, and Sala y Vierge. The poems proposed for illustration will be "Misere," "La Selva Oscura," "La Vision de Fray Martin," "La Lamentacion de Lord Byron," and others inedited. It is also proposed to issue the poem of Campoamor entitled "El Rio Piedra," illustrated by Villegas. It is to be hoped that these attempts to unite the sister arts may prove such a success as to induce further ventures in the same direction.

—*Athenæum*.

SCIENCE AND ART.

THE COPPER PRESENT IN COAL.—An examination by Stolba of specimens of coal, chiefly from Bohemia, shows the invariable presence

of a small quantity of copper. (*Sitzber. böhm. Gesellschaft der Wiss.*, April, 1880.) The ashes of the coals, carefully prepared, always showed a strong copper reaction; the pure coal itself contained a trace only of copper; the pyrites accompanying it gave a strong reaction. In fact the strength of the reaction appears to go hand in hand with the amount of pyrites present in the coal. The never-failing copper of the coal determines the amount of copper present in iron prepared with such coal or coke. The copper present in the coal with which we heat our ovens can be shown by the following simple method. When the coal is burnt and ceases to give a flame, and only the so-called glow is to be observed, a spoonful of pure salt is to be thrown upon it and stirred about with a tongs or stick of wood. Immediately the azure blue flames of carbonic oxide containing copper chloride are produced, and the appearance lasts some time. Coal which contains much pyrites exhibits the color with great intensity and in great beauty. This, doubtless, is the cause of the color which is so familiar to most people, and for which many explanations have been proposed.

FIRE-PROOF AND WATER-PROOF PAPER.—A French journal describes a kind of paper which is fire-proof and water-proof. It is made of a mixture of asbestos fibre, paper paste, and a solution of common salt and alum; is passed through a bath of dissolved gum-lac, and then goes to the finishing rollers. The strength and fire-resisting capability are increased by the alum and salt; and the lac renders the paper impermeable to moisture, without producing unsuitability for ink.

COLOR-BLINDNESS IN THE UNITED STATES.—The United States Government has taken prompt and vigorous action on the basis of the recent conclusions come to by scientific investigators as to the prevalence of color-blindness. Both in the army and the navy, and in the case of pilots, systems of examination have been devised and are enforced to secure the detection of color-blindness in all cases in which such a defect would be likely to lead to inefficient discharge of duty. As we formerly intimated, also, the State of Connecticut insists that all railway employes within its borders be tested for the same purpose, and doubtless in time such a law will be passed in all the other States. The following are the rules for conducting the examinations in the State of Connecticut: Rule 1. For the qualitative estimation of color-blindness the following tests are to be employed: Holmgren's worsteds, the Tables of Stilling, Donders's color-test patterns, Pflüger's letters, with tissue papers. Woinow's revolving cards may also be used. For the quantitative test for color-blindness,

Donders's reflected spots, Donders's method with transmitted light, and Holmgren's shadow-tests shall be employed. Rule 2. The following are the requirements for a certificate in the first class: 1. Healthy eyes and eyelids, without habitual congestion or inflammation. 2. Unobstructed visual field. 3. Normal visual acuteness. 4. Freedom from color-blindness. 5. Entire absence of cataract or other progressive disease of the eyes. The second class shall have: 1. Healthy eyes and eyelids, without habitual congestion or inflammation. 2. Unobstructed visual field. Visual acuteness at least equal to three fifths without glasses and normal with glasses in one eye, and at least one half in the other with eye glasses. 4. Freedom from color-blindness in one eye, color perception at least equal to three-fourths in the other eye. Rule 3. In the case of employes who have held their positions five years or more, the standards required in each class shall be determined under special instructions from the Board of Health.—*Nature*.

FISH OUT OF WATER.—It is well known that some fishes can exist out of water for a long time, and many instances are upon record of carp, catfish, eels, and others living many hours out of water. We now have to record an instance of a fish being sent by rail a long distance, and arriving alive and safe. During the past summer Colonel M'Donald, of the U. S. Fish Commission, happened, while in Alabama, to obtain two large buffalo fish (*Bubalictys urus*) from the Alabama River, which he wished to send to the Smithsonian Institution, and, thinking that they might arrive in better condition if left alive as long as possible, he packed them in moss and delivered them to the express office at Montgomery, where they lay twelve hours before starting. How much time elapsed between the taking of the fish and the opening of the box in Washington we do not know, but it is certain that when it was opened both fish were alive.

CONCENTRATION OF OZONE.—It is known that, with the aid of a considerable reduction of temperature, MM. Troost and Hautefeuille have succeeded in preparing ozone in a very concentrated state. At 55° gas is obtained with 60 per cent of ozone. Interesting effects have been obtained by compressing this gas, or even oxygen, with 20 per cent of ozone, in M. Cailliet's apparatus. Quick compression gives rise to very brilliant luminous phenomena. Much heat is liberated, and the tube flies to pieces; the ozone is then decomposed. If, on the other hand, the compression be performed very slowly, one sees the gas become a violet-blue of deeper and deep-

er tint, and such is evidently the color of ozone (as may be observed when a tube surrounded by black paper contains a current which is subjected to the action of the electric efflux; after some sparks, the interior of the tube presents exactly the color of blue sky). When the ozone subjected to 35 atmospheres is allowed suddenly to expand, a blue mist is produced, consisting evidently of liquefied ozone. For oxygen to change its state a pressure of 300 atmospheres is required.

ANTHROPOLOGY OF THE LAPPS.—During the summer of last year Professor Mantegazza and M. Sommier visited Norway and parts of Lapland; and, having provided themselves with photographic apparatus and craniometrical instruments, were enabled to collect, in a short time, a rich mass of anthropological data. Mantegazza has lately described the journey in a popular work entitled "Un Viaggio in Lapponia coll' amico Sommier" (Firenze). The results of the scientific observations, which are intended to accompany a limited issue of the photographs, are published in the current number of the *Archivio per l' Antropologia*. These observations were made upon ninety-seven Lapps, and the following particulars were noted with reference to each individual: name, sex, age, birthplace, stature; circumference, length, and breadth of head; cephalic index, length and breadth of face, facial index, color of hair and of eyes, strength, and, finally, what has been termed "Ecker's character"—that is, the relative lengths of the second or index-finger and the fourth or ring-finger. From the tabulated results published in this memoir, we learn that the mean height of the male Lapps was 1.524 metre, and of the females only 1.450 metre. Next to the small stature, the most striking physical characteristic of the Lapps is the excessive width of the face. The mean cephalic index, measured on the living head, was found to be 87.15 in the men and 87.64 in the women; but measurement of sixteen skulls gave a mean index of 84.91. It was observed that in the Lapp hand the index is, as a rule, shorter than the annularis; and anthropologists will remember that this result agrees with Ecker's conclusion as to the relative length of the fingers in races of low culture.

SOLAR THUNDERS AND THE PHOTOPHONE.—While on a visit to the observatory at Mendon, under the guidance of M. Janssen, Professor Graham Bell, we are told, conceived the idea of employing the photophone to explore the noises which must necessarily accompany the vast movements of matter taking place on the solar surface or photosphere, and M. Janssen, who was much struck with the notion, immediately

placed all the instruments of the observatory at Professor Bell's disposal. The day being fine on Saturday, October 31, Professor Bell proceeded to put his plan in trial, and explored a great image of the sun, about two feet in diameter, with a sensitive cylinder of selenium. But the results were not very successful, although they gave sufficient encouragement to justify Professor Bell in expecting ultimate success. Instead of exploring the solar image direct (in which the variations, though representing considerable solar disturbances, are not rapid enough, even with the most powerful instruments, to affect the photophone sufficiently), M. Janssen thinks the better way would be to pass a succession of solar photographs of the same "spot" before an object-glass casting conjugate images on the selenium. These photographs would be taken at intervals great enough to give notable variations in the constitution of the spot; and thus would be condensed into a short time variations which in reality took place too slowly to affect the selenium as they occurred. To carry out this idea M. Janssen has undertaken to work in conjunction with Professor Bell, and we may hope to hear before long that the tremendous noises of solar movement have been plainly reproduced upon the earth.—*Engineering*.

CUTANEOUS INSSENSIBILITY.—In Pfeuger's *Archiv* there is reported the case of a patient, age sixteen, the whole of whose cutaneous surface was completely insensible, so that the strongest stimuli applied to the skin did not excite any painful expression. A similar anesthesia was shown in nearly all the accessible mucous membranes of the body, and muscular sensibility was completely wanting. In addition to this, there was a complete loss of smell and taste. Finally, the right eye was amaurotic, and the left ear deaf; so that when the left eye was bound up and the right ear stopped there was no further avenue of stimulus to the patient's brain. When the latter experiment was actually carried out, the patient in about five minutes sank into a deep sleep, from which he only could be roused by the stimulus to the ear or by the stimulus of light,—he could not by shaking alone. When the patient was left to himself, he awoke in the course of the day, after many hours of sleep, either through internal stimuli, or from the excitation of the brain system through slight and unavoidable stimuli from without. The case seems to be, in some respects, without a parallel.

COLOR COMBINATIONS.—Professor Rood, of Columbia College, has tried the effects of mixing white light with colored light, and has obtained results which may be interesting to

artists as well as to physicists. He combines a white disk with colored disks, and finds on rapid rotation that vermilion becomes somewhat purplish, orange becomes more red, yellow more orange, yellowish green more green, green becomes more blue green, ultramarine more violet, and purple less red, while greenish yellow remains unchanged.

HIGH-PRESSURE STEAM-ENGINE.—The Anthracite, a steam-yacht of seventy tons, has crossed the Atlantic from England to America in eighteen days on a consumption of nineteen tons of coal. This is the smallest steamer that has ever made the voyage under steam; and the satisfactory result is due to a persevering endeavor to construct an engine capable of working with high-pressure steam. There are, as in Colonel Beaumont's compressed air-engine, three cylinders of different sizes, so arranged that the steam passes from one to the other with economy of power. The boiler will bear a pressure of two thousand five hundred pounds on the square inch, and contains when filled ninety gallons of water. The packing of the cylinders is "Perkins' patent metal," a compound of tin and copper, which requires no oil or other lubricant, and contributes importantly to the possibility of using high-pressure steam; for the boiler is thereby preserved from the injurious effect of grease and acids. None but distilled water enters the boiler; and this is used over and over again, the small quantity of waste being restored from an adjacent tank. Thus constructed, the Anthracite has proved that high-pressure steam may be employed with safety, and that a large economy of fuel, and consequently of space, may be effected. Ship-owners, whose profits are made out of the space available for passengers or cargo, will not fail to recognise the value of these facts. And though the engine in the first instance costs more than an ordinary marine engine, a compensation may be found in the durability of the boilers and the disuse of lubricants. During three generations have the Perkins family been engaged in solving this problem; and it may be that the present generation will see high-pressure become general in sea-going steamers. The results cannot as yet be foretold; but that trade and intercourse will be affected, cannot be doubted. And if the Czar's yacht *Livadia*, with her shallow draught and peculiarly shaped hull, should prove successful, will not shipbuilding undergo a wonderful change?—*Chambers's Journal*.

ANTIDOTE IN CHLORAL.—Professor Huseman, of Gottingen, has made some interesting investigations relating to the antagonistic and antidotal action of certain drugs, and especially in respect to chloral hydrate. He confirms

what was previously known of the latter, namely, that it is an antidote to strychnine, lessening the spasm, and even preventing death. He finds that it has a similar action in the case of the mixture of strychnine bases sold under the name of brucin, and also against the opium alkaloid, thebaïa, which simultaneously tetanizes and lessens sensibility. The spasms produced by chloride of ammonium diminish under the employment of non-fatal doses of chloral hydrate, and can indeed be completely stopped. Nevertheless, death occurs probably from the paralyzing effect of both substances on the respiratory centre. But the antidotal effect of chloral on the action of the poisons which cause convulsions by their action on the brain is not the same for all these substances.

COMPRESSED AIR AS A MOTIVE POWER.—A few months ago we gave a brief account of experiments made at Philadelphia with locomotives driven by compressed air. Similar experiments have been tried on tramways in the neighborhood of Paris; but in neither case was the desired success achieved. The question, however, was not likely to be given up; for the advantage of compressed air over steam is great from the economical as well as the practical point of view. Colonel Beaumont, of the Royal Arsenal, Woolwich, has for some time worked thereat, and trials of his air-engine have been made with satisfactory results. It weighs ten tons, has a reservoir in which one hundred cubic feet of air can be compressed to one thousand pounds on the square inch; and thus charged, it travelled from the Arsenal to Dartford and back, about thirty miles, in sixty-three minutes. The machinery and the wheels work in comparative silence; there is none of that noisy hiss and roar which accompanies the use of steam.

Colonel Beaumont has overcome some of the difficulties which beset former inventors, by placing three cylinders of graduated size on each side of his engine, and by applying warmth, to counteract the cold produced in the expansion of compressed air. At present, it will draw a load of sixteen tons, and is to be employed in the work of the arsenal; and there is reason to believe that similar machinery is to be tried for propelling the torpedo boats. With a larger engine, heavier loads could be drawn; underground railways would then no longer be made stifling by the sulphurous smoke from steam locomotives, and horses would no longer be required on tramways.—*Chambers's Journal*.

SUNSHINE AS AN AGENT IN MECHANICAL WORK.—The French in Algeria are continuing their experiments for the conversion of sun-

shine into mechanical work, by means of what is called a solar boiler; and it is now proved that, in countries where the sun does really shine, boilers may be heated and machinery kept going without the aid of fire. Whether it can be made use of for railway purposes, remains to be tried. Meanwhile, the distillation of alcohol from Barbary figs, is to be carried on in a large solar boiler. There will be no expense for fuel; the figs cost next to nothing; the refuse serves as food for cattle, and alcohol will be produced at the rate of two hundred litres a day. Much advantage is anticipated; for at present, Algeria imports thirty thousand hectolitres of alcohol.

ORGANIC GERMS IN THE AIR.—M. Yung, of Geneva, lately read a paper to the Helvetic Society of Sciences on organic dust in the atmosphere. With regard to its influence on public health, he distinguishes two groups of particles, the spores of champignons of the mold-group, and germs of micro-bacteria, the latter being the more important. In agreement with M. Miguel's observations at Montsouris, he observes a notable increase of germs during the hot months of summer and a decrease in winter. Opening globes filled with neutralized bouillon, quite sterilized by heat, on mountains, glaciers, the ocean, and the Mediterranean, in volcanic craters, and various other circumstances, he has found that in most cases ten to twenty cubic centimetres of air sufficed to introduce germs of organisms capable of growing and living in successive or simultaneous generations, according to species. Two exceptions are noted; one being that of a globe open at Geneva after an abundant fall of snow; the bouillon remained quite clear, proving that snow for a time clears the air of germs. The other was that of a globe opened in an isolated ward of Geneva Hospital, where a diphtheric child was being nursed. On the other hand, fresh snow gathered in winter on the mountains round Geneva confirmed the previous results as to the extreme diffusion of microscopic organisms. M. Yung was unable to prove a connection between the number of atmospheric germs and the recurrence in the same place of a particular contagious or epidemic disease.

AUSTRALIAN TREES.—In his anniversary address, the president of the Linnean Society, Dr. Allman, described the aspects of vegetation as observed in certain localities on the shores of the Mediterranean, and instanced the *Eucalyptus globulus* as an important introduction from more southern latitudes. This tree, he stated, "is planted round almost all the towns on the Riviera, and as it is of amazingly rapid growth has already attained in many places a great size. Though destitute of the graceful

form of many of our European trees, it is still a tree of striking and often picturesque aspect. The foliage is of a glaucous tint . . . and the leaves presenting their surfaces vertically to the wind, tremble like the leaf of the aspen in the gentlest breeze; and though casting but little shade, impress us, like the murmuring of running water, with a pleasant sense of coolness in the sultry summer air." Another Australian tree, also of rapid growth, naturalized in the same district, is the *Casuarina*, remarkable "by the graceful symmetry of its forms, and singular pendulous ramification." "It has already attained," says Dr. Allman, "a height of some thirty or forty feet; and when the wind rushes through its branches, the long melancholy sigh with which the tree responds, is unlike the sound called forth by the same cause in any other with which I am acquainted."

THE PHYSIOLOGY OF WALKING.—A careful summary is given by the *Lancet* of the manner in which M. Marey has investigated some points in the physiology of walking. "Some time ago he devised an apparatus for registering the steps, which he has called an *odograph*. It consists of a small cylinder, rotating by means of clock-work in its interior; and of a pen which marks on the cylinder, and is raised at each step by an impulse communicated by a ball of air beneath the sole. Observations have been made on a number of young soldiers. It was ascertained that the step is longer in going up hill than in going down hill. It is shorter when a burden is carried; longer with low than with high heeled boots; longer when the sole is thick and prolonged a little beyond the foot than when it is short and flexible. It thus appears that the heel may with benefit be almost indefinitely lowered; while it is disadvantageous to prolong the sole of the boot beyond a certain limit, or to give it an absolute rigidity. Some influences which lengthen the step lessen its frequency; so in going up hill, the step becomes at the same time longer and less frequent. In walking on level ground the length of the step and its frequency are always proportioned; the quicker the walk, the longer the step. Nature here proves the folly of the high heel in a most practical manner; and the objection to them in men is equally applicable to ladies; and if they could only see themselves as they totter along perched up on high heels and walking as if stepping on egg-shells, their ludicrous appearance would at once stop the fashion. Any one accustomed to country-life and long walks on the hills, must have felt that terrible leg-weariness which a day's shopping with a lady entails. The slow irregular walk, the frequent pauses, and the difficulty of taking short steps with proper balance, are trials well

known to men. Without a good-shaped low-heeled boot, no lady, however pretty her foot or graceful her carriage, can walk becomingly, with ease to herself, and a proper flexion of the muscles of the feet and legs. Half the ricked ankles come from heels being too high to form a proper steady base for the weight of the body, and the narrow pointed toes prevent their proper expansion and use.

EFFECT OF THE ELECTRIC LIGHT ON VISION.—Professor Cohn, of Breslau, has been lately making some experiments with the electric light on the eyes of a number of persons, for the purpose of testing its special influence, in different cases, on visual perception and the sensation of color. Among the interesting results of these investigations may be mentioned the fact that letters, spots and colors are perceived at a much greater distance through the medium of electric light than by day or gas light. The sensation of yellow was increased sixty fold compared to daylight, of red six fold, and of green and blue about two fold. Eyes that could only with difficulty perceive and distinguish colors by daylight or gaslight were much aided by the electric light, and the visual perception was also much strengthened. Professor Cohn concludes, therefore, in view of this fact, that electric lights would prove exceedingly useful in places where it was desirable that signals should be observable at a great distance. The engine employed in these experiments was a Gramme electro-magnetic apparatus, which rotates six hundred times in a minutes.

MISCELLANY.

THE BURMESE.—It is most astonishing how some of the natives live. There are men who have never done a stroke of work in their lives, and yet they go about in silks, and are as well set up as if they had a fixed income. Such a thing as a starving man is unknown in the country. Charity is a leading doctrine of the Buddhist faith, and people are generous to a fault. If a man cannot get dinner anywhere else, he has only to turn into the first monastery, and he will have enough and to spare, and not a question or a penny will be asked. Deserters from British regiments, and sailors who have left their ships, and the miscellaneous class of loafing bodyguards who are a disgrace to the British name in the East, are never in want of a meal in the smallest Burmese village, and might stay for years without ever being asked to do a hand's turn for their maintenance, as long as they do not get drunk and uproarious, which, as a matter of fact, they always do. Nevertheless, however badly his predecessor may have conducted himself, the loafer always meets with unflinching kindness,

even though he asks for money, as some of them, lost to all sense of decency, are not ashamed to do. But money very few Burmese have. When a man makes a haul with a lucky contract, or judicious paddy speculation, he forthwith gets rid of his fortune. If it is a large sum, he probably builds a pagoda, or a *sayat*, or *tasoung*, a resting-house, or an image-house. If he cannot aspire to gaining so much merit toward a future existence, he gets an image of brass or marble, and dedicates it with much solemnity and extensive feasting, or he gives promiscuous alms, and announces it all over the country side, in each instance disposing of what coin may remain by engaging a troop of actors and giving a *Pebai*. Then he is penniless and happy again. It is this sort of thing which promotes the friendly intercourse between all ranks, and obliterates class distinctions. They have entirely avoided the curse of Adam, and scout the necessity of earning bread with the sweat of their brow. What puzzles them most is the consideration how they can get the greatest possible amount of enjoyment with the least possible trouble. They can always muster a good dress. Even those inexplicable people who never do anything, come to you in a fine silk *pulsoe*, the national petticoat-like waistcloth, and assure you, with woe-begone visage, that they are in the most heart-rending depths of poverty. They do not ask for money. I never saw a Burmese beggar, except the poor lepers on the Pagoda steps. Their sole object in coming seems to be to relieve their feelings and excuse their laziness to themselves. You get them a clerkship, perhaps, and they keep it for a fortnight, and then resign, from sheer listlessness, and commence the old business over again. All the same, they are always in the most perfect good humor, and ready to take part in any fun that is going. Some years ago there was a great fire in Mandalay, which burned down a large suburb. Some of the burned-out families came, weeping and lamenting to the residency chaplain, to tell of their misfortune. He promised to do what he could for them, and the same evening went along to see where they were going to put up for the night. To his astonishment he found the entire burned-out population assembled together, looking at a play which was being performed on a stage rigged up hastily among the charred posts of the houses, and greeting the jokes of the *Loobyet*, the clown of the piece, with as hearty laughter as if nothing whatever had happened. The case was about as good an example of Burmese *insouciance* as could well be found, and the reverend gentleman thereafter looked upon misery as a thing non-existent among the Burmese.—*Cornhill Magazine*.

BELLS.—The history of bells is one of the most interesting in the record of inventions. They were first heard of about the year 400, before which date rattles were used. In the year 610 we hear of bells in the city of Sens, the army of Clothaire, King of France, having been frightened away by the ringing of them. In 960 the first peal of bells was hung in England at Croyland Abbey. Many years ago it was estimated that there were at least 2262 peals of bells, great and small, in England. It has been thought that the custom of ringing bells was peculiar in England; but, in fact, the Cathedral of Antwerp, celebrated for its magnificent spire, has a peal of bells ninety in number, on which is played every half hour the most elaborate music. It is an interesting fact that the peal of bells in the tower of the old Royal Exchange was chiming "There's nae gude luck about the house" when the building was on fire. It would require ninety-one years to ring all the changes on a peal of twelve bells, supposing ten changes—that is, one hundred and twenty sounds—to be struck every minute. For the changes of fourteen bells, 16,575 years would be required, and for twenty-four bells, 117,000,000,000,000 years.—*Bucks Advertiser*.

ARTIFICIAL EYES.—So many people have unfortunately to wear an artificial eye that a little general information on this subject may prove acceptable. Artificial eyes have been used from the remotest times to remedy the deformity arising from a shrunken eye, and it is said that they have been found among the mummies of ancient Egypt. Formerly they were made of gold, copper, glass, porcelain, and other substances, but now enamel is always used. The artificial eye is not a globe, but is a mere shell, painted on the front to represent what henceforth will be its fellow. The adaptation and correspondence involve much more than merely matching the color. Some artificial eyes are so well made and so carefully adapted that they escape detection not only by casual observers, but also by doctors conversant with the strides made of late years in this department. It is essential that the eye should not be too thick, on account of its weight, and it must not be too thin, or it will be brittle. There are many advantages in wearing a false eye after the true one is lost. Let alone the question of appearance, it keeps the eyelids in their proper position, it prevents the lashes from turning inward and producing irritation, and it prevents foreign bodies from entering the eye. Many a servant wears an artificial eye without his employer being aware of it. It is sometimes necessary that the stump of the eye—the remains, that is, of the true

eye—should be adjusted to fit the artificial eye and ensure the proper movements, but this is readily done by the surgeon. An artificial eye should never be worn except at the advice of a medical man. Its use should not be commenced too soon after the loss of the true eye, for the stump continues to shrink for some time, and yet the wearing of the eye must not be delayed too long, or the eyelids may contract.—*Family Physician*.

GEMS AS CHARMS.—Not only the natives of India, the Egyptians, the Jews, and other nations of ancient history, had full faith in the occult power of gems, but even the highly-cultivated Greeks believed in it. The Greek trust in the wonder-working power of precious stones is expressed in numerous works of their classical writers, and stands forth strikingly in an "Ode on Gems" by the national singer Orpheus. In this poem, of about eight hundred pages, a list is given of all the precious stones known to the Greeks, and the supernatural qualities ascribed to each of them. Orpheus calls gems in general "the highest gift of Jove to mortals," bestowed upon them as "a sure remedy against all earthly woes." All precious stones, says Orpheus, are hidden by the gods underground, "in mystic caves," and whosoever can discover them will be rewarded by "endless blessings;" to the possessors "care and sorrow will be unknown, as well as illness, and they will always obtain victory in battle." Coming to specify the virtues of each individual gem, Orpheus advises that "if thou wearest a piece of the agate stone on thy hand, the immortal gods will ever be pleased with thee; and if the same be tied to the horns of thy oxen when ploughing, or round the ploughman's sturdy arm, wheat-crowned Ceres will descend from heaven with full lap to throw it upon thy furrows." Of the ruby Orpheus says: "From off the altars thou, like the crystal [garnet or carbuncle], dost send forth a flame without the aid of fire," and of the topaz: "Adorned with it man may gain at once the heart of every woman, and woman the heart of every man." Happy Greeks! The acquisition of a topaz must surely, among them, have made the course of true love to run for ever smooth. The belief in precious stones as "charms," dating back to the most remote ages, is still flickering at the present time. It exists yet in parts of our Indian empire, and is said to be notably strong in Persia. That august visitor to our shores, the Shah, has, on good authority, a number of gems in the possession of which he puts the firmest faith, as a protection against all earthly ills and misfortunes. Accidental circumstances perhaps helped to strengthen this faith, for on one occasion the bullet of a would-be assassin

glanced off from the casket of jewels which the "King of Kings" wears always on his breast. It may be that, on this account, the Shah of Persia has come to be the proprietor of the largest collection of jewels in the world, the total being valued at from three to four millions sterling.—*Antiquary*.

COLD FEET.—It is, as we have often labored to show, a mistake to suppose there is any warmth in clothes. Animal heat, is the direct result of changes going on within the body itself. Nutrition by food, and the discharge of energy by exercise, are the efficient causes of heat. Clothes "seem" to warm because they prevent the cold air and objects with a capacity for heat which surround the body from attracting the heat generated within its organism. The clothing is simply an insulator. It follows that it should be light in weight, and above all things that it should permit the free and full circulation of blood through every part of the system—to the end of every finger and toe—and that the muscular apparatus of the extremities should be in perfect working order. If we will wear foot-coverings, whether boots or stockings, which compress the feet and render the separate action of each toe impossible, it is simply absurd to expect to be warm-footed. Heat is the complement of work and nutrition; and if a part of the organism is so bound that it cannot work and its supply of blood is limited it must be cold. The resort to stouter and heavier clothing under such circumstances is simply ridiculous. Generally it is the stockings that compress the feet. The garter acts as a ligature, and diminishes the blood-supply, while the stocking itself acts as a bandage, and impedes the circulation through the extremities.—*Lancet*.

RIGHT AND WRONG.

(FROM THE PORTUGUESE OF CAMOENS.)

*"Os boos sempre passar
No mundo,"* etc.

I saw the virtuous man contend
With life's unnumbered woes;
And he was poor, without a friend,
Pressed by a thousand foes.

I saw the Passions' pliant slave
In gallant trim, and gay;
His course was Pleasure's placid wave,
His life a summer day.

And I was caught in Folly's snare
And joined her giddy train;
But found her soon the nurse of Care,
And Punishment, and Pain.

There surely is some guiding Pow'r
Which rightly suffers wrong,
Gives Vice to bloom its little hour,
But Virtue late and long.

